



# INFLATION REPORT

---

June 2010\*

\* Submitted by the Technical Team for a meeting of the Board of Directors on July 23, 2010

Banco de la República  
Central Bank of Colombia  
Bogotá, D. C., Colombia  
ISSN - 2145 - 6526



# THE INFLATION TARGETING STRATEGY IN COLOMBIA

## OBJECTIVES

Monetary policy in Colombia is based on inflation targeting, which is intended primarily to keep inflation low and to ensure stable 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

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

## COMMUNICATION AND TRANSPARENCY

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

# CONTENT

Developments In The Inflationary Situation And Monetary Policy Decisions	9
I. Inflation And Its Determinants	15
A. Recent Developments In Inflation	15
B. Inflation Determinants	20
Box 1: Measuring The Gdp Through Chained Indices	36
II. Financial Markets	39
A. Foreign Markets	39
B. Domestic Financial Markets	45
Box 2: Capital Flows To The Emerging Economies	53
III. The Macroeconomic Outlook	56
A. International Context	56
B. Balance Of Payments	62
C. Domestic Growth	63
D. Inflation Forecast	69
Box 3: Performance Of And Outlook For The Global Macroeconomic Imbalances	75
Annex: Macroeconomic Projections of Local and Foreign Analysts	78

# INDEX OF GRAPHS

Graph 1	Annual Consumer Inflation	15
Graph 2	Annual Core Inflation Indicators	17
Graph 3	Annual Inflation of Regulated Prices and Their Components	17
Graph 4	Annual Inflation of Tradables and Non-tradables Excluding Food and Regulated Prices	18
Graph 5	Annual Inflation for Non-tradables Excluding Food and Regulated Prices	19
Graph 6	Annual Food Inflation	19
Graph 7	Food Price Inflation	20
Graph 8	Gross Domestic Product	21
Graph 9	Unemployment Rate by Areas	26
Graph 10	Unemployment Rate (UR)	26
Graph 11	Global Rate of Participation (GRP) and Employment Rate (ER)	27
Graph 12	A. Employed in the National Total B. Employed in the 13 metropolitan areas	27
Graph 13	Employed by Type of Employment	27
Graph 14	Salaried Workers as a Proportion of the Total Population and CCI	28
Graph 15	Index of Nominal Sector Salaries: Heavy Construction and Housing	28
Graph 16	Index of Nominal Sector Salaries: Industry and Commerce	28
Graph 17	Productivity per Hour Worked in Industry	29
Graph 18	Total PPI	29
Graph 19	PPI by origin	30
Graph 20	Implicit PPI in Dollars	30
Graph 21	Produced and Consumed PPI by Branches of Economic Activity	30
Graph 22	Indices of Non-salary Costs Arising from SAM	31
Graph 23	Use of Installed Capacity (UIC)	32
Graph 24	Annual Growth of the GDP: Observed and Potential	32
Graph 25	Output Gap	32
Graph 26	A. Inflation Target Credibility as a Percentage for the Years 2003 to 2010 B. Observed Inflation and Inflation Expectations	34
Graph 27	Forecast of Annual Inflation According to Banks and Stock Brokers	34
Graph 28	Forecast of Annual Inflation Excluding Food Prices According to Banks and Stock Brokers	34
Graph 29	Break-even inflation at one, five and ten years	35
Graph 30	Indicators of Volatility in Developed Economies	40
Graph 31	Differential in the Rates in the Interbanking Markets	40
Graph 32	Interest Rates for 10-year Public Debt Securities from Some Developed Countries	41
Graph 33	Spread Between 10- and 2-year Public Debt Securities	41
Graph 34	5-year Credit Default Swaps (CDS) for some European Countries	41
Graph 35	Differential with Germany in the 10-year Sovereign Debt	41
Graph 36	Performance of the Euro	42
Graph 37	Total Consumption Loans in the United States	43
Graph 38	5-year Credit Default Swap (CDS) in Latin America	43
Graph 39	5-year Credit Default Swap (CDS) in Asia	43
Graph 40	Indices of the Nominal Exchange Rate in Some Latin America Countries	45
Graph 41	Stock Market Indexes for Some Latin American Countries	45
Graph 42	Stock Market Indexes for Some Asian Countries	45
Graph 43	Monetary Base by Use	46

Graph 44	A. Monetary Aggregates	47
	B. Total Deposits and their Main Components	47
Graph 45	Gross Loan Portfolio with Leasing (N/C)	47
Graph 46	A. Commercial Portfolio and Leasing	48
	B. Ordinary Credit N/C	48
Graph 47	F/C Portfolio Aggregate and Non-financial Private Sector Foreign Indebtedness	48
Graph 48	Policy rate, BBI and IBR	50
Graph 49	IGBC	51
Graph 50	A. Size of the Portfolio	51
	B. Position of the Long Term TES	51
Graph 51	Indices of Real Housing Prices and the Real Mortgage Portfolio	52
Graph 52	Consumer Confidence Indices in Some Developed Economies	57
Graph 53	Market Sentiment Indicators	57
Graph 54	GDP of Some Developed Economies	58
Graph 55	Real Consumption in the United States	58
Graph 56	Unemployment Rate in Developed Economies	58
Graph 57	Net Employment Creation	58
Graph 58	Length of Unemployment in the United States	59
Graph 59	GDP for Some Emerging Countries in Latin America and Asia	59
Graph 60	Retail Sales in Latin America	60
Graph 61	Total Nominal Exports in Latin America	60
Graph 62	International Price for WTI Petroleum	61
Graph 63	Total Inflation in Some Developed Economies	62
Graph 64	Inflation in Latin America	62
Graph 65	Fedesarrollo Consumer Confidence Indicator	64
Graph 66	Retail Trade Excluding Fuel	64
Graph 67	Index of Industrial Production Excluding Coffee Threshing	65
Graph 68	Total Demand for Energy	65
Graph 69	Forecast Range of the GDP for 2010 and 2011	68
Graph 70	Imaco: Five Month Leader of the GDP	69
Graph 71	Fan Chart of Total Inflation	72
Graph 72	Fan chart of inflation excluding food	72

# INDEX OF TABLES

Table 1	Breakdown of Annual Inflation Based on Upward Pressures as of June 2010	16
Table 2	Annual Change in the GDP by Type of Expenditure	22
Table 3	Annual Change in the GDP by Branches of Economic Activity	23
Table 4	Produced and Consumed Contribution to the PPI	31
Table 5	Bank Holdings of Greek and Southern European Assets	42
Table 6	Central Bank Benchmark Interest Rates	44
Table 7	Nominal Interest Rates	50
Table 8	Changes in the Predictions of Real Growth for Our Trading Partners	61
Table 9	International Prices for Commodities	62

# DEVELOPMENTS IN THE INFLATIONARY SITUATION AND MONETARY POLICY DECISIONS

At the end of the second quarter of 2010 inflation in Colombia was at 2.25%, a figure that is lower than what was projected by not only the Bank but also by the market on the average. This occurred together with an economic growth that, according to the most recent report from DANE as well as the new information that was available, has been higher than expected. The reductions in the Bank's benchmark interest rates, in turn, continued to be transmitted to the market interest rates and credit continued registering better rates of growth.

With respect to inflation, the upward risks related to the Niño phenomenon and its effect on the prices of food and regulated goods and services which were reported at the end of 2009 and beginning of 2010 were curtailed, due to that the final impact on these baskets ended up being minor. Furthermore, even though the decline in some of the core inflation indicators was halted, their levels and trends suggest that inflationary pressures are under control and that said indicators will remain within the long term target range fixed by the Banco de la República Board of Directors (between 2% and 4%) for what is left of the year. These results have had an influence on the inflation expectations of agents. These expectations have dropped over the course of the year and are within the long term inflation target range.

With respect to economic activity, the National Bureau of Statistics (DANE in Spanish) reported that in the first quarter of 2010 the GDP grew 4.4%, a figure that is higher than what was projected by the market, on average, as well as by the Bank. Part of the higher economic growth was due to the change in the methodology used to calculate national accounts. The other part was due to the better than expected performance of economic activity that was primarily because of the more substantial government consumption and exports that fell less than was budgeted for.

For the rest of the year, the new information that is available from the indicators such as consumer confidence, imports of durable consumer goods and retail sales suggest that household consumption will continue to recover.

The upswing in imports of capital goods, especially for industry, is also a symptom that investment in fixed capital could show growth that is similar to what was seen in the first quarter of 2010, especially investment other than public works projects.

So far this year, the recovery in consumption and investment is also explained by the actions on the part of monetary policy which took interest rates for loans to historically low levels and likewise contributed to a better performance for credit. In fact, since the change in monetary policy posture, which began in December 2008, the interest rates for the different types of savings and loans declined at a similar pace and, in the case of the rates for consumption loans, they fell at a faster rate than the reductions in the Bank's benchmark interest rate. So far to date, the annual increase in the total gross loan portfolio stabilized at rates that were close to 5% after the slowdown that occurred last year. As of June 2010, the strongest portfolios were mortgages (22.2%) and consumer (8.9%). The changes in loans going to households together with the transmission of the Bank interest rate to the market interest rates is evidence that the banking credit channel is active and that it will continue stimulating the aggregate demand.

The better pace of growth for domestic demand has occurred in the context of a sharp drop in Colombian exports to Venezuela and of a better than expected worldwide growth. In the case of our main trading partner, the United States, the recovery has occurred hand in hand with an unemployment rate that has not shrunk, a loan market that remains depressed and a declining public stimulus. These facts raise questions about the sustainability of the economic reactivation in that country.

Meanwhile, the fiscal problems of some European countries raised the risk premiums for the whole world though to levels that are much lower than the ones that were seen right after the bankruptcy of Lehman Brothers. Towards mid-May the fiscal and monetary support announced by the European Central Bank, the European Community and the International Monetary Fund for those economies having problems made the risk premiums ease off. Thus, various currencies of emerging countries appreciated again with respect to the dollar and euro, a tendency that the Colombian peso also followed.

This being the case, it is probable that foreign demand will remain weak though recovering for the rest of the year and that the interest rates set by the central banks' of the main developed economies will remain low. The international prices for the main commodities that Colombia exports could stay at levels that are higher than those registered in 2009.

Because of all of the above, the Bank's technical team raised their forecast range for 2010 from an interval of between 2.0% and 4.0% to one that is between 3.5% and 5.5%. Although this new range implies an upsurge in economic growth that is greater than expected, the indicators of installed industrial capacity and the weakness in the labor market and in foreign demand suggest that the output gap could come to an end this year and even go into negative territory towards the middle of next year.

With this macroeconomic environment, in the months of May, June and July 2010 the Board of Directors of the Banco de la República (JDBR in Spanish) decided to keep the benchmark rate unchanged at 3% and expect that a policy rate at that level would contribute to short term growth without putting the inflation target for this and next year at risk. The Board also reiterated that the future monetary policy actions would depend on new available information.

**Board of Directors of the Banco de la República**



# INFLATION REPORT

**Prepared by:**  
Programming and Inflation Department  
Economic Studies Subdivision

Technical Management

Hernando Vargas

**Deputy Technical Governor**

Division of Economic Studies

Jorge Hernán Toro

**Chief Officer**

Programming and Inflation Department

Carlos Huertas

**Department Head**

Inflation Section (\*)

Adolfo León Cobo

**Section Head**

Édgar Caicedo

Anderson Grajales

Daniel Parra

José David Pulido

Rafael Puyana

José Vicente Romero

Alejandro Reyes

(\*) This report was prepared with the help of Rocío Betancourt, Luis Hernán Calderón, Daira Garrido and Carolina Arteaga; Chief and Experts from the Macroeconomic Programming Section respectively; Eliana González, Expert from the Macroeconomic Models Department; Enrique López E., Principal Researcher from the Research Unit, Silvana Mantilla, Sebastián Ramírez and Jessica Aranda students interns.

# I. INFLATION AND ITS DETERMINANTS

**Inflation in the second quarter** was lower than expected because the Niño phenomenon had a moderate impact and because of the greater appreciation of the peso.

**In the first quarter, the growth of the economy**, primarily stimulated by domestic demand, surpassed the predictions. In spite of that, the economy continues to show a surplus of productive capacity.

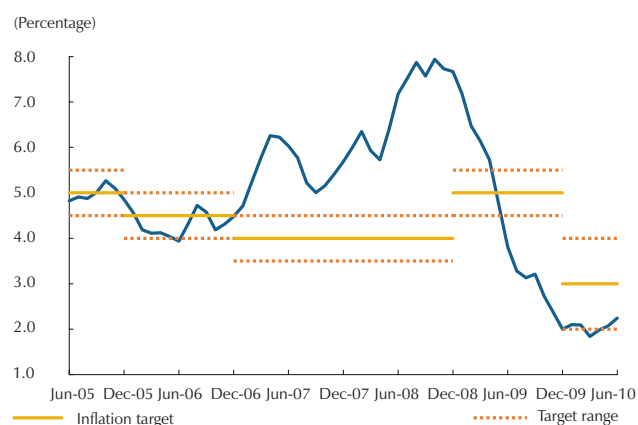
**Employment showed signs of recovery**, but the unemployment rate remained relatively high. This, together with the low expectations for inflation, made it possible for salary adjustments to stay within the target range.

## A. RECENT DEVELOPMENTS IN INFLATION

In Colombia, annual consumer inflation (CPI) rose slightly during the second quarter of the year while staying very close to the lower limit of the long term target range (2%-4%). For June, the result was 2.25% compared to 1.84% for March (Graph 1). The increase in annual inflation turned out to be significantly less than was expected by the March Inflation Report and the market. Between January and June, consumer prices rose 2.5%, one of the lowest adjustments that has been seen for the first half of any year since statistical information has been recorded (1955) but one that was a bit higher than the adjustment for 2009 (2.2%).

In the last three months, the pressures on annual consumer inflation came mainly from the basket of

Graph 1  
Annual Consumer Inflation



Source: DANE, Banco de la República calculations.

food and prices for regulated services. The other two components of the CPI – tradables and non-tradables excluding food and regulated prices– did not show upswings (Table 1).

Table 1  
Breakdown of Annual Inflation Based on Upward Pressures as of June 2010

Description	Weighting	Annual growth					Percentage Share in the Second Quarter Upswing	Percentage Point Share in the Upswing (year to date)
		Dec-09	Mar-10	Apr-10	May-10	Jun-10		
Inflation								
Total	100.0	2.0	1.8	2.0	2.1	2.2	100.0	0.2
Excluding food	71.8	2.9	2.4	2.4	2.5	2.5	18.3	(0.3)
Tradables	26.0	1.4	0.3	(0.3)	(0.5)	(0.5)	(50.6)	(0.5)
Non-tradables	30.5	4.4	3.8	3.9	4.0	3.8	4.4	(0.2)
Regulated	15.3	2.6	3.4	3.8	4.6	5.1	64.5	0.4
Food	28.2	(0.3)	0.3	0.9	1.0	1.5	81.7	0.5
Vegetables, fruit, tubers and milk	5.1	(4.2)	0.6	3.1	2.9	4.3	45.9	0.4
Grain, oil, etc.	8.0	(3.9)	(2.7)	(2.7)	(2.4)	(1.5)	22.4	0.2
Eating out, etc.	11.6	5.1	4.1	4.2	4.4	4.3	6.2	(0.1)
Beef and its substitutes	3.5	(4.1)	(6.2)	(5.1)	(5.6)	(5.3)	7.1	(0.0)

Source: DANE, Banco de la República calculations.

For the second quarter of the year, the models anticipated an increase in annual inflation associated, for the most part, with the effects of the Niño weather conditions on food prices. However, the impact of this phenomenon was more limited than what had been seen in previous episodes and was counteracted by other events that exercised downward pressure on price adjustments. Specifically, the drop in sales to Venezuela continued to have repercussions on food prices just as it has since the end of last year and allowed adjustments that were lower than normal for this time of the year especially given the presence of the Niño.

Another factor that helped to moderate the upswings in prices and even allowed declines was the accumulated appreciation of the exchange rate, a factor that also became more accentuated in the last few months due to the strengthening of the peso. Likewise, the foreign prices for manufactured products have tended to remain stable and have even decreased due to the limited buoyancy of worldwide demand, especially in developed countries. This has been transmitted to domestic prices and has reinforced the deflationary effects of the appreciation of the peso.

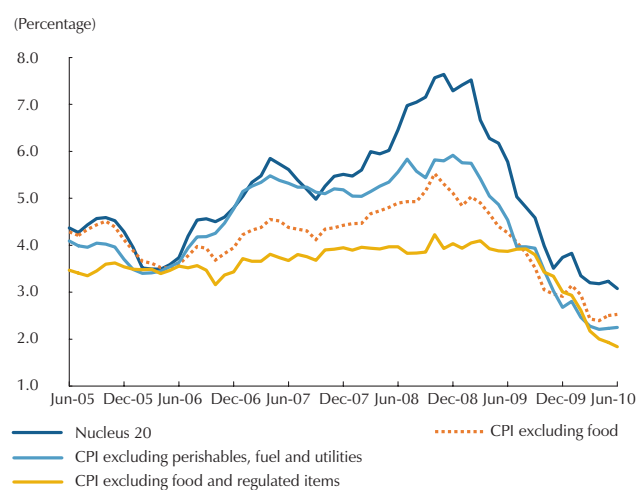
Annual inflation has remained at a low level in spite of the upsurge in domestic economic growth and the clear recovery of domestic demand led

by consumption in the first half of the year. This was possible due to the fact that the economy continued to exhibit surpluses of productive capacity which limited the appearance of pressure on prices and to this was added low expectations for inflation that were within the target range established by the monetary authorities.

## 1. Core inflation

The various indicators for core inflation that are monitored by the Banco de la República tended to stabilize at low levels during the second quarter after the plunge that they took starting in March last year. As of June, the average for the four indicators (2.4%) is similar to what was seen three months ago (2.5%) and is within the long term target range.

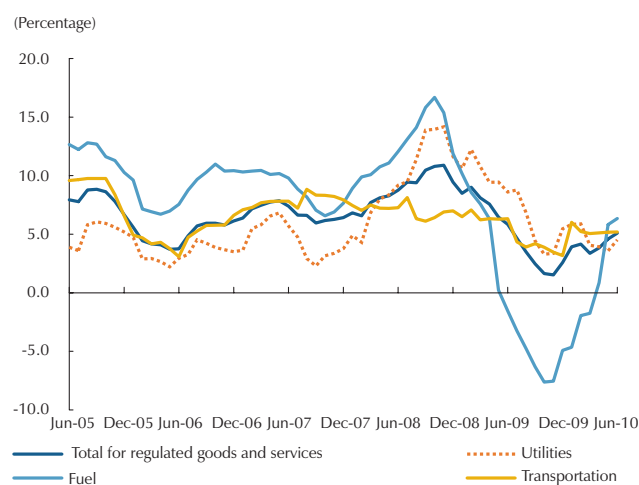
Graph 2  
Annual Core Inflation Indicators



Apart from the CPI excluding food and regulated prices that registered an annual variation of 1.8% in June, the rest of the core inflation indicators were within the long term target range. The annual change for the CPI excluding food was 2.5% compared to 2.4% in March and 2.9% in December. The nucleus 20 was still the indicator that showed the highest level (3.1%) as has been the case for a number of years (Graph 2).

The performance of core inflation confirms the absence of significant inflationary pressures during the first half of 2010. Core inflation has also turned out to be favored by the appreciation of the peso, the low expectations and by the slump in annual inflation in 2009. This has translated into limited price adjustments in 2010 because of the numerous indexation mechanisms (salaries, price contracts, regulation formulas) that exist.

Graph 3  
Annual Inflation of Regulated Prices and Their Components



When we concentrate on the CPI excluding food and its main components, the upward pressures in the second quarter came exclusively from the prices for regulated goods and services (Graph 3). This is similar to what happened in the first quarter of the year. The rise in the annual variation of the CPI for regulated goods and services (at 5.1% in June from 3.4% in March) was more than what had been predicted in the last *Report on Inflation*, and appeared in both the fees for utilities and the prices for fuel.

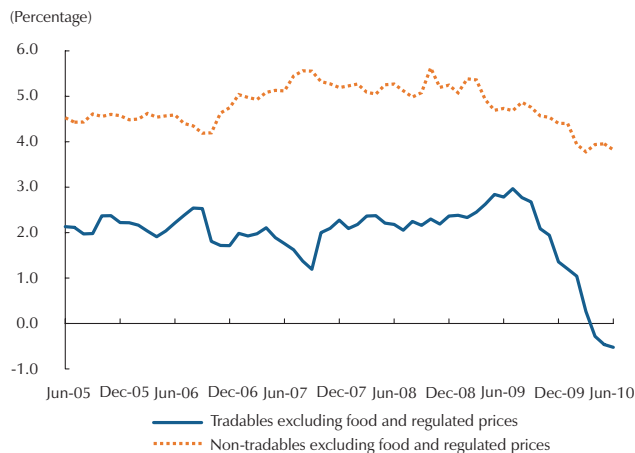
In the case of utilities, the Niño weather conditions contributed to relatively high readjustments in the household electricity fees, which showed an annual change of 7.7% at the end of the quarter. The substitution of thermal for hydro sources to generate electricity caused an increase in the cost of providing the service for users which translated into an increase in the fees for the end consumer. In addition, the fact that the fees in the distribution component of electricity service were leveled in the eastern part of the country (Huila, Boyacá, Arauca, Cundinamarca and Bogotá) has also led to and could lead to adjustments in the fees that might surpass the inflation target. This fee leveling would imply increases for the fees in Bogota and would have a rather significant effect on the CPI.

With respect to the prices for fuel, a COP\$200 adjustment (equivalent to 2.7%) was made in April, which was added to another adjustment equal to that had been made in February. According to the government, the increases have been justified by the existing gap between the international price and the domestic price (once taxes are discounted), which has endured in spite of the appreciation of the exchange rate and the decrease in the international price for petroleum in the second quarter. Fuel costs, which include not only gasoline but also diesel, could be transferred to the overall transportation costs in the next few months. This would put upward pressure on the prices for the consumer basket.

Within the CPI excluding food, the downward pressures associated with the appreciation of the peso and with the lower manufacturing prices continued falling in, primarily, the CPI for tradables. The annual change for this indicator remained in negative territory in the second quarter since it stood at -0.5% in June (Graph 4). Another factor that could be affecting this trend is the weakness of demand, especially due to the plunge in sales to Venezuela, which has had a significant impact in sectors such as automobiles. To date this year, including the second quarter, absolute falls in prices for vehicles, cell phones and the majority of appliances, etc. have been seen on orders of magnitude that have surpassed the declines in past periods.

Meanwhile, the annual change in the CPI for non-tradables excluding food and regulated prices dropped a little in the last three months after the more significant falls that were seen between October last year and March of this year (Graph 4). As of June therefore, this indicator remained below the roof of the target range. The presence of surplus productive capacity in spite of the upsurge in growth, the inflation expectations that are low and consistent with the market's long term target, the indexing of the prices for this sub-basket starting

Graph 4  
Annual Inflation of Tradables and Non-tradables Excluding Food and Regulated Prices



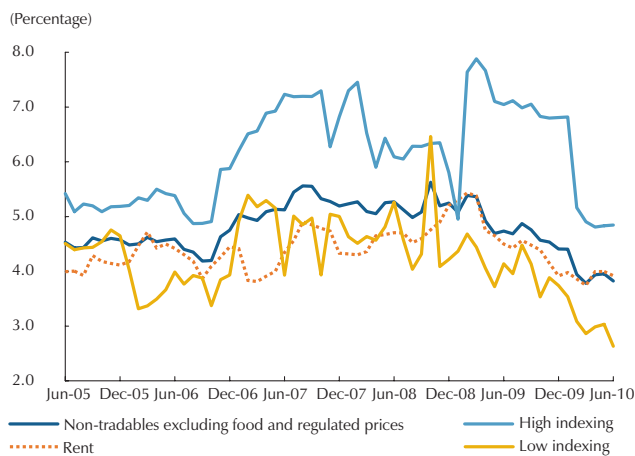
Source: DANE, Banco de la República calculations.

from the low inflation at the end of 2009 and the salary adjustments –which are also compatible with the target– explain the declining trend of the annual variation in the CPI for non-tradables to date this year.

Within the basket for non-tradables excluding food and regulated prices three trends can be seen. The first, which corresponds to items that usually have a highly indexed component such as health, education and financial services, etc. for which there was a significant drop in the annual variation in the first quarter of the year but which was cut short in the second. Thus, this variable went from 6.8% in December to 4.8% in April, the month in which it stabilized. In any case, the annual rate is still high with respect to the target and the probability is that it will remain at this level for the rest of the year since the changes in prices for the second half of the year are usually limited for this group of items. Another tendency is the one that rent is showing. In the case of rent, the annual change remained very close to the ceiling of the target range in the first half of

the year including the last three months. The most recent falls, in this case, were in 2009 and in the past, they were associated with significant plunges in domestic demand like the ones that occurred at the end of the last century and beginning of this one. A third trend is the one for the prices of goods and services which is characterized by a lower degree of indexing. These items, which bring together primarily labor-intensive services, are usually more sensitive to the changes in domestic demand. This would explain the reduction that was seen in their annual change in the first two quarters of this year as well as their lower level (in June 2.6% compared to 3.7% in December 2009 and 2.9% in March of this year) (Graph 5).

Graph 5  
Annual Inflation for Non-tradables Excluding Food and Regulated Prices



Source: DANE, Banco de la República calculations.

Graph 6  
Annual food inflation



Sources: DANE; Banco de la República calculations.

## 2. Inflation of Food Prices

The annual inflation of food prices rose in the second quarter thus reversing the marked declining trend they had followed since the end of 2008 (Table 1 and Graph 6). The upsurge, although expected, was significantly less than what had been predicted in the previous quarterly report. For March, the result remained low compared to past episodes, and especially, to periods in which there was a Niño weather pattern.

For the last three months, rises in prices for those edibles that are susceptible to changes in the pattern of rain have been expected. Although

Graph 7  
Food Price Inflation



Source: DANE, Banco de la República calculations.

increases associated with the limited rainfall were registered, they were significantly less than what had been predicted in the previous reports and were concentrated in the most perishable types of food such as vegetables, legumes, and some tubers, in particular. Other prices such as those for meat and milk products which usually rise in Niño periods did not go up this time and their levels remained practically stable compared to what had been seen in the first quarter (Graph 7).

Among the various factors that could be cited to explain the limited upswing in prices and food price inflation is the plunge in sales to Venezuela, a phenomenon that has already had deflationary effects since the end of last year. The appreciation of the peso likewise helped to moderate the increase in prices for imported edibles such as grain and oil. The stability that international prices showed in the first and second quarters also contributed to this unlike what happened in 2008 and part of 2009 when they fell sharply.

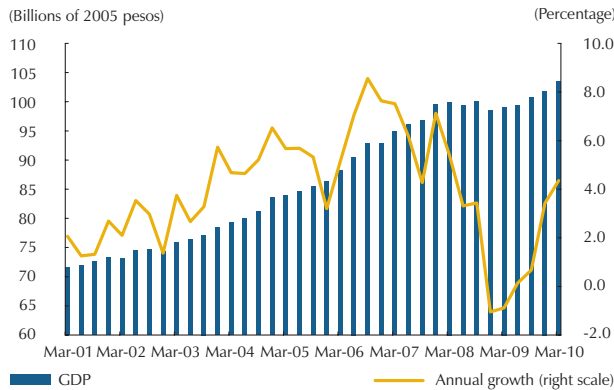
However, it is necessary to keep in mind the fact that consumer inflation and the food basket inflation may be less vulnerable today to the changes in prices for the most perishable food items due to the lesser importance assigned to these in the CPI. In the December 1978 revision of the CPI, the weighting of food such as vegetables, fruit and tubers was at 11.9%. In 1998, it had gone to 9.2% and in the 2008 revision, which is the current one, it is only 2.8%. Another factor that could also have contributed to the lower vulnerability, at this time, was a possible upswing in the supply of vegetables, which would have replaced the production some tradable crops like flowers, which had lost profitability. Last of all, better technology such as irrigation and biotechnology may have contributed to the increase in productivity and thus lessen the impact of climatic changes on production.

## B. INFLATION DETERMINANTS

### 1. Aggregate Demand

According to the figures from the National Bureau of Statistics (DANE), the gross domestic product (GDP) for the first quarter of 2010 calculated on the basis of a new methodology grew at an annual rate of 4.4%. This figure is higher than had been predicted by the analysts' consensus and by the Banco de la República in their last *Report on Inflation* (2.3% to 3.1%). Compared to the GDP from the immediately preceding quarter, the one for the first quarter of this year rose 1.5% thus completing five consecutive periods of rising economic activity (Graph 8).

Graph 8  
Gross Domestic Product



Source: DANE.

The large difference between the observed and the expected behavior of the GDP can be attributed to two factors. The first one is the significant methodological innovations introduced into the calculations of the GDP, which included a revision of the base year for national accounts (from 2000 to 2005). An important change consisted of the implementation of chained indices to measure the real evolution of the GDP and its components. With this, the weighting of the elements that the GDP is made up of (see Box 1 for details on the advantages and disadvantages of the new methodology) can be updated year after year. Together, the methodological revision and the change in the base led to alterations in the series (for

example, growth in 2009 went from 0.4% to 0.8%. That for the fourth quarter went from 2.5% to 3.4%.) and to changes in sector shares that were impossible to anticipate and that explained a significant part of the prediction error.

In the second place, the prediction error is also the result of the underestimate of the behavior of both private and public domestic demand. Everything points to the return of consumer and business confidence occurring more rapidly than expected in the first quarter. To this was added the recovery of credit in the midst of low interest rates and an abundance of resources available for loans. The indicators for economic activity that were announced after the publication of the last *Report on Inflation* showed signs of going in that direction and made it possible to make an upward revision internally to the predictions over the course of the quarter.

With respect to the real GDP based on type of expenditure, growth in the first quarter of 2010 was driven to a large degree by the performance of private consumption (Table 2).<sup>1</sup> During this period, household purchases expanded 3.5% in annual terms thus highlighting the significant strength shown by the acquisition of durable goods such as vehicles. The rise in private consumption can be explained by several factors: i) by an increase in the income available for consumption thanks to the lower debt servicing that resulted from the drop in the market interest rates, ii) by the relative improvement in employment quality as well as by the recent decline in the unemployment rate, iii) by a low inflation rate and, especially, by the reduction in the prices of imported goods, which raised the purchasing power of family income and iv) by a better perception of the current and future economic conditions.

Some of these factors had begun to take effect starting in the middle of last year but at the beginning of 2010, they seemed to have acquired strength. Because of that, household consumption completed four quarters of positive

<sup>1</sup> To date the change in inventory is unknown and, therefore, so is the gross formation of capital.

Table 2  
Annual Change in the GDP by Type of Expenditure  
(Percentage)

	2009				Full year 2009	2010 I Qtr.	I Qtr. 2010 contributions (pp) <sup>a/</sup>
	I Qtr.	II Qtr.	III Qtr.	IV Qtr.			
<b>Total consumption</b>	<b>(0.0)</b>	<b>1.4</b>	<b>1.3</b>	<b>2.5</b>	<b>1.3</b>	<b>4.0</b>	<b>3.2</b>
Final government consumption	(0.7)	2.4	3.2	5.3	2.6	6.1	0.9
Household consumption	(1.5)	1.6	1.2	3.1	1.1	3.5	2.3
<b>Gross capital formation</b>							
Gross fixed capital formation	0.8	2.7	3.5	5.7	3.2	8.0	1.9
<b>Total exports</b>	<b>7.0</b>	<b>(2.2)</b>	<b>(6.8)</b>	<b>(12.0)</b>	<b>(3.9)</b>	<b>(6.3)</b>	<b>(1.2)</b>
<b>Total imports</b>	<b>(1.6)</b>	<b>(11.2)</b>	<b>(12.7)</b>	<b>(10.2)</b>	<b>(9.0)</b>	<b>2.2</b>	<b>(0.5)</b>
<b>GDP</b>	<b>(0.9)</b>	<b>0.1</b>	<b>0.7</b>	<b>3.4</b>	<b>0.8</b>	<b>4.4</b>	<b>4.4</b>

a/ Banco de la República calculations  
Source: DANE

annual growth. This made it possible for its level to surpass the maximum seen before the recession (during the first quarter of 2008) by 1.9% in the first quarter of this year.

The better performance of private consumption is added to government consumption, which grew at an annual rate of 6.1%. This is significantly better than what was expected. However, given that its weight in the GDP is less than that of private consumption, it contributed more modestly to total growth. Public consumption had also seen a substantial upswing towards the end of last year.

The recovery of expenditures also included the gross fixed capital formation, which had relatively high growth (8.0%) in the first quarter of 2010. This contrasts with what had been seen in the last two years (except for the fourth quarter of 2009). In spite of this recovery, its rate of growth is still far from the maximums seen in 2006 and is still below the average annual expansion registered since 2001.

During the first three months of this year, the gross formation of fixed capital was driven by investment in public works projects similar to what happened for a large part of 2009. With respect to investment other than public works projects, even though we do not have official series, it is possible to infer a new downturn in the first quarter which, nevertheless, would be smaller than the ones registered in the second half of last year. The above is consistent with the performance of the national production of machinery as well as with the recovery in the level of imports of capital goods. It is important to emphasize that the gross formation of fixed capital, measured with the new 2005 base, expanded throughout all of 2009. In contrast, when this was estimated using the former base, it was stagnant.

The net exports showed a negative contribution to the growth of the GDP. First, imports grew at a positive annual rate for the first time since the fourth quarter of 2008. This expansion is explained primarily by the larger purchases of consumer goods and raw materials. Secondly, exports continued contracting in annual terms although at a lower rate than what had been seen last year. Data from foreign sales that has been broken down show that the products that contributed the most to halt the fall in exports were flowers, petroleum and vehicles. In the latter case, there are indications that the Venezuelan market has been partially replaced.

By branches of economic activity, the sector that contributed the most to the annual growth of the GDP was total construction as it surged 16% with respect to the same period last year (Table 3). The significant strength of that sector was the result of the performance of public works projects as has already been stated. Construction of buildings, in turn, showed an annual downturn (-2.3%) though this included an anemic rise with respect to the level shown in the previous quarter. This tiny expansion was primarily associated with building low-income housing (VIS in Spanish), which compensated for the mediocre performance of the other segments of building construction, especially offices, storefronts and warehouses.

Table 3  
Annual Change in the GDP by Branches of Economic Activity  
(Percentage)

	2009				Full year 2009	2010 I Qtr.	I Quarter, 2010 contribution to annual growth in pp <sup>a/</sup>
	I Qtr.	II Qtr.	III Qtr.	IV Qtr.			
Agriculture, forestry, hunting and fishing	(1.8)	(2.6)	0.7	2.3	(0.4)	(1.3)	(0.1)
Mining and quarrying	10.3	8.6	7.5	11.9	9.6	13.2	0.8
Manufacturing industry	(7.9)	(9.9)	(4.9)	(0.5)	(5.9)	3.9	0.5
Electricity, gas and water	(0.6)	(0.5)	2.1	4.6	1.4	6.5	0.2
Construction	1.1	18.3	14.7	25.2	14.6	15.9	1.0
Commerce, repairs, restaurants and hotels	(2.7)	(2.0)	(3.2)	(1.1)	(2.3)	3.6	0.4
Transportation, storage and communication	0.8	0.6	(2.0)	0.7	0.0	2.6	0.2
Financial, insurance, real estate and business service establishments	5.3	3.3	1.9	2.0	3.1	1.5	0.3
Social, communal and personal services	0.5	0.7	2.5	1.6	1.3	4.1	0.6
Aggregate value subtotal	(0.5)	0.3	1.2	4.0	1.2	4.6	4.0
Taxes minus subsidies	(4.7)	(4.9)	(4.5)	(2.5)	(4.2)	3.7	0.3
<b>Gross Domestic Product</b>	<b>(0.9)</b>	<b>0.1</b>	<b>0.7</b>	<b>3.4</b>	<b>0.8</b>	<b>4.4</b>	<b>4.4</b>

a/ Banco de la República calculations.  
Source: DANE.

In addition to construction, the mining sector also contributed significantly to the growth of the GDP since it expanded 13.2% in annual terms. The favorable performance of the sector continues to be the result of the constantly rising production of petroleum in response to the substantial amounts of money invested in that area over the last few years. Likewise, the extraction of other mining products such as coal and non-metallic material (which are primarily intended for construction) remained dynamic and grew at rates of above 5% annually.

Other sectors that also made a significant contribution to growth were services, commerce and industry. In the case of services, which grew 4.1% annually in the first quarter, most of the momentum was registered in those services offered by the government thus making the role played by the public sector in this reactivation evident. In commerce in the first quarter, there was a significant upswing in the retail sales of cars, appliances, computers, etc. which, together with a noticeable buoyancy in hotel and restaurant services, made an expansion of the sector GDP at an annual rate of 3.6% possible. Industry, in turn, grew 3.9% thus showing a substantial surge in comparison to the previous quarter. In spite of the fact that industrial sales in the foreign market continue to suffer from the decline of trade with Venezuela, domestic demand and the gradual replacement of that market have largely supported the recovery of production in that area. The replacement of Venezuela as a market is occurring for some segments of industry through new markets in Ecuador, Brazil and Central America.

In contrast, the sector with the worst performance for the first quarter was agriculture where economic activity slumped 1.3% in annual terms. The annual fall in the agricultural GDP during the first quarter was due to a downswing in the GDP for the fish industry and to a coffee production that continued to show very low levels with respect to last year. It was affected by, among other things, the crop renewal that occurred in the last few years.

## EXPORTS AND IMPORTS IN DOLLARS IN MAY, 2010

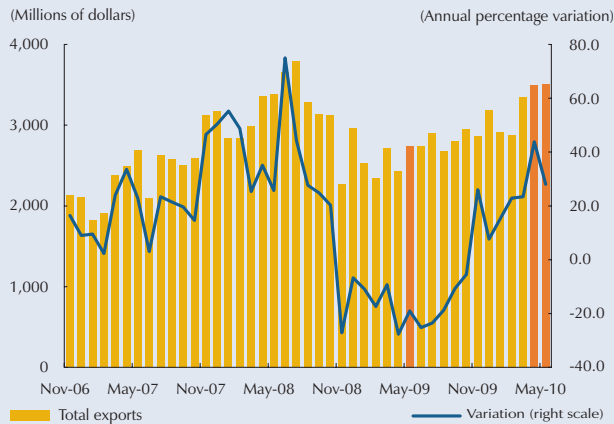
As of the date when this report was written, DANE had released the figures for foreign trade up to the month of May, 2010. In April and May total exports in dollars reached US\$3.500 m on average thus registering an increase of 35.4% with respect to the same period of the previous year (Graph A). This performance is explained by the 56% surge in the value of sales abroad by the mining sector and the 26% jump for the industrial sector. In volume they showed rises of 25.2% and 28.2% respectively.

With respect to the main export products coffee, coal, nickel-iron, and petroleum and its derivatives— these

represent on average 63% of the total foreign sales for April and May and surged 67% in value and 27% in volume during these months in comparison to a year ago. The markets for these products were primarily the United States, China, India and France.

Furthermore, in the last two months the value in dollars of the exports of the industrial sector excluding the main products (coffee, petroleum derivatives, nickel-iron and gold) was similar to those for the same period in 2009, which implies an annual growth of only 0.1% (Graph B). By markets, the sales of the products from that sector to

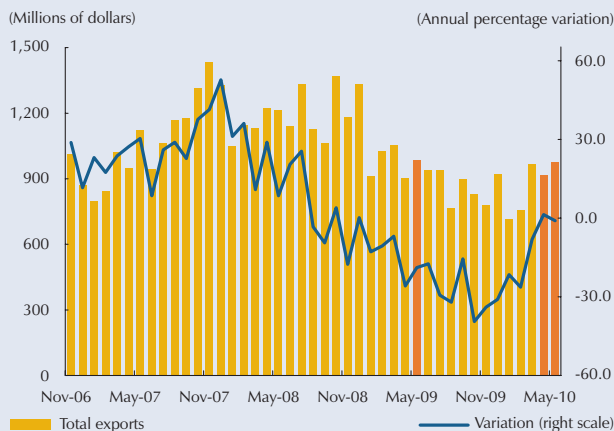
**Graph A**  
Total Exports  
(monthly)



Source: DANE.

Venezuela plunged at an annual rate of 66.5% in April and May while to the United States and to the other countries (excluding the United States and Venezuela) sales jumped at annual rates of 34% and 48% respectively (Graph C). It must be emphasized that those sales to Ecuador went up 45.3%; to the European Union, 46.4%; to the countries of the Latin American Integration Association (LAI) (excluding Venezuela), 68.4%; and to Asia, 74.7% with respect to the same period in the previous year. These markets as a whole represent just over 49% of the industrial exports excluding the main products.

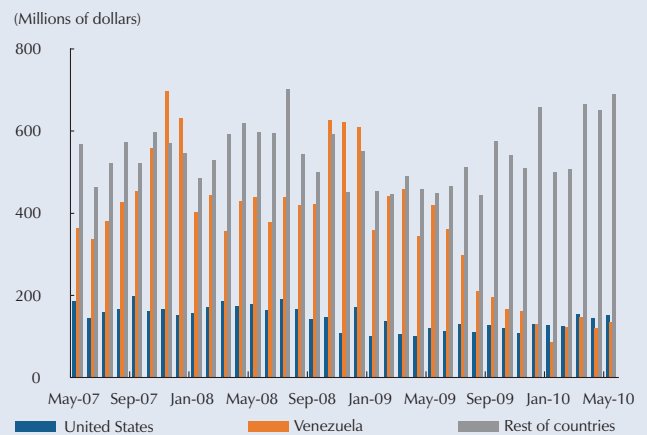
**Graph B**  
Industrial Exports Excluding Main Products



Source: DANE; Banco de la República calculations.

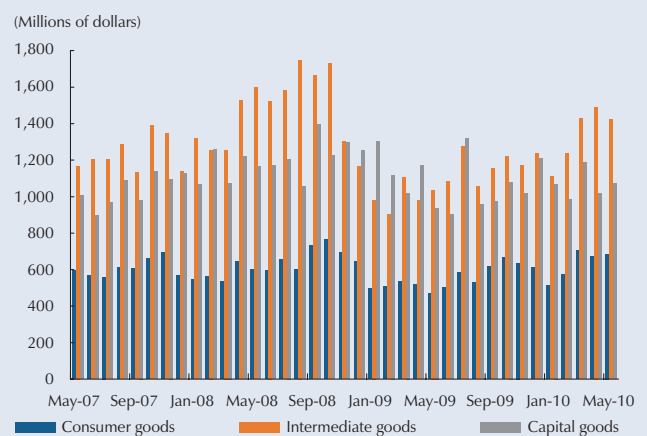
The total imports (CIF) in April and May were, on average, US\$3.183 m, which is 24.4% higher than the value registered in the same months last year. The increase in imports was mainly due to higher purchases of consumer goods (37.4%), to be precise, durable goods as well as of intermediate goods (44.5%), specifically, fuel and goods for industrial use. The purchase of capital goods registered a slight reduction of 0.8% for that period with respect to what occurred a year before (Graph D).

**Graph C**  
Industrial Exports to the United States, Venezuela and Other Countries Excluding Main Products<sup>a/</sup>



a/ Excluding coffee, petroleum derivatives, nickel-iron and gold.  
Source: DANE; Banco de la República calculations.

**Graph D**  
Imports of Goods (CIF)

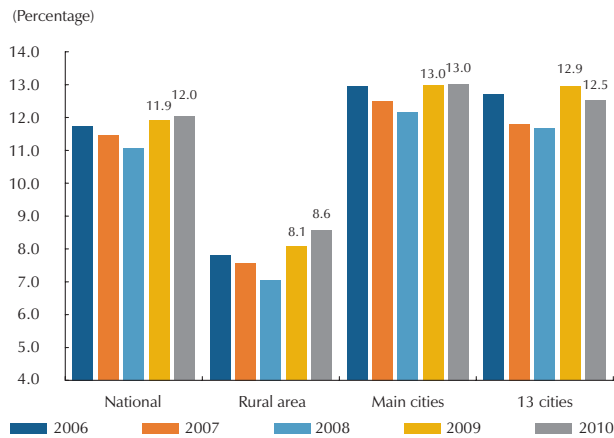


Source: DANE.

## 2. Labor market and salary costs

The available information indicates that the labor market has begun to recover. The unemployment rate has declined mainly because the pressure from the supply of labor has abated and although employment has grown little, the quality has improved. In spite of this, the unemployment rate is still at high levels and the labor market is still weak. This could compensate for the expected increase in the demand for workers thus preventing the appearance of inflationary pressure through salary costs for the rest of the year at least.

Graph 9  
Unemployment Rate by Areas  
(Moving quarter) (March-April-May)



According to the general integrated household survey (GEIH in Spanish) over the course of the second quarter, the deterioration in unemployment ceased. Thus, for the March to May quarter, the unemployment rate (UR) for the national total stopped rising in annual terms and remained at 12%. It diminished even in the thirteen areas as it went from 12.9% during the same period in 2009 to 12.5% in 2010 (Graph 9). What is more, upon analyzing the seasonally adjusted series, it can be seen that, over the course of the quarter, the UR declined with respect to the levels seen at the end of 2009 and the beginning of 2010,<sup>2</sup> for both the national total and the urban areas (Graph 10).

Graph 10  
Unemployment Rate (UR)  
(Seasonally adjusted moving quarter)

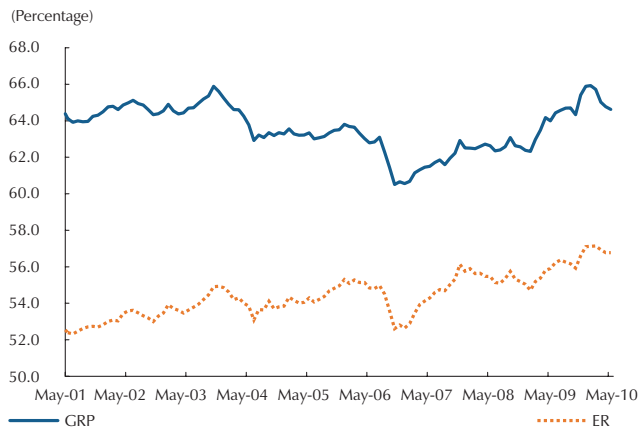


The decline in the UR is associated mainly with lower pressure from the labor supply. As was mentioned in previous reports, some of the causes of the expansion of the labor supply in 2009 were the greater instability in employment for the head of the household, as well as the loss of quality employment and the deterioration in household income. The available information points to these factors having shown an improvement in 2010 as the decline in the underemployment rate for heads of households and the fall itself in the UR for this segment of the population suggests. In addition, there is evidence that workers' income has recovered since the end of 2009.<sup>3</sup> With these new conditions,

2 Even though unemployment showed a slight improvement in the month of May, it is probable that this will turn out to be a transitory increase. This is due to the fact that the larger economic expansion that is projected for 2010 and the signs of productive activity that has recovered so far this year could lead one to think that the reduction in unemployment in annual terms will remain steady in the next few months.

3 For example, the GEIH information indicates that the income of full-time wage-earning workers began to grow in annual terms starting in the fourth quarter of 2009.

**Graph 11**  
Global Rate of Participation (GRP) and Employment Rate (ER)  
(Seasonally adjusted moving quarter)



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

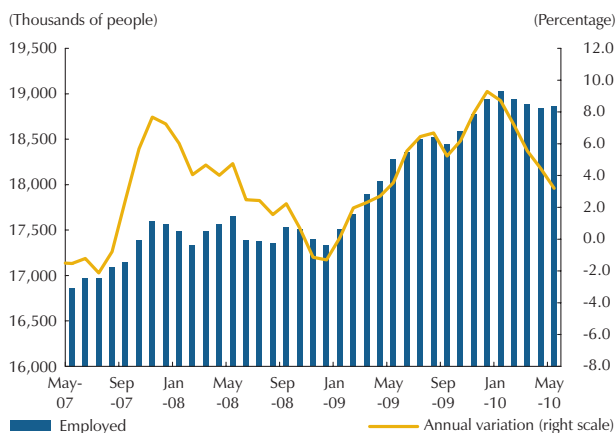
the secondary household agents could be halting their entrance into the labor market in search of complementary employment. It is possible that this could be the reason behind the decline in the global rate of participation (GRP) from the peaks that were seen at the beginning of this year (Graph 11).

With respect to the demand for workers, the GEIH shows that total employment continued to grow in annual terms even though at an even lower rate than in previous quarters. Furthermore, when the seasonally adjusted series are examined, a stagnation in their levels can be seen so far this year (Graph 12) in spite of a recovery in salaried employment. This tendency was due to the fact that non-salaried employment fell thus suggesting the substitution of higher quality formal employment for low quality informal employment (Graph 13). Experience has shown that, at the beginning, economic recoveries usually come hand in hand with this type of adjustment in the labor market. This occurs because the better perspective for economic activity and the relatively low salary adjustments allow more quality employment to be created.

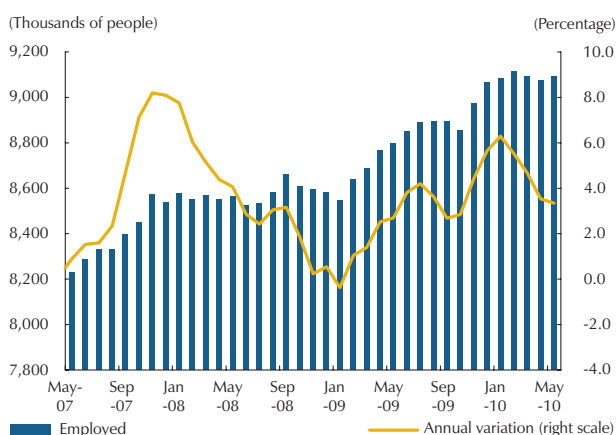
The rise in salaried employment is leading the households to have a better perception of the current labor conditions and of the expectations for future income thus raising their confidence. This effect can

**Graph 12**

**A. Employed in the National Total**  
(Seasonally adjusted moving quarter)

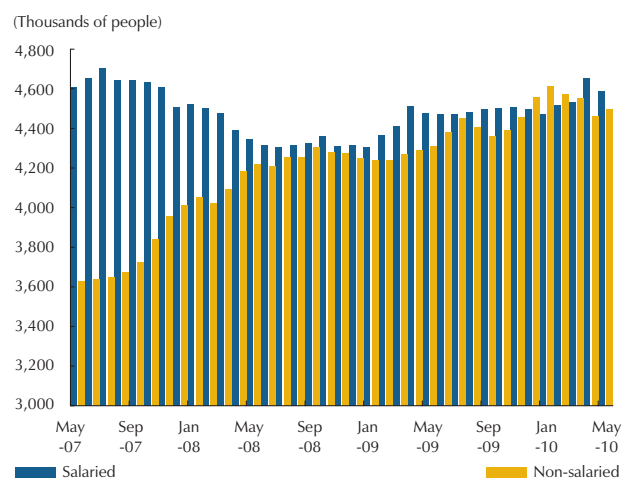


**B. Employed in the 13 metropolitan areas**  
(Seasonally adjusted moving quarter)



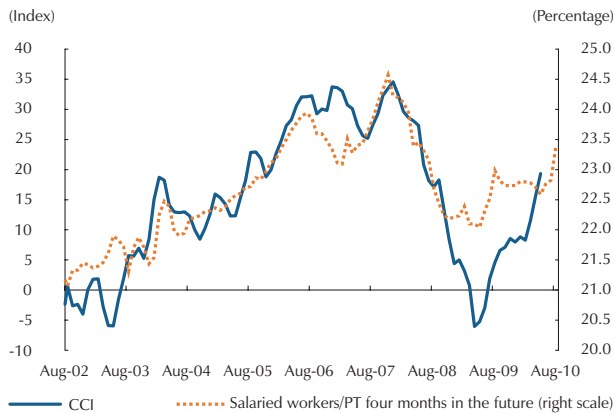
Source: DANE (GEIH) Banco de la República calculations.

**Graph 13**  
Employed by Type of Employment  
(13 areas, seasonally adjusted moving quarter)



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

**Graph 14**  
**Salaried Workers as a Proportion of the Total Population and CCI<sup>a/</sup>**  
 (13 areas, seasonally adjusted moving quarter)

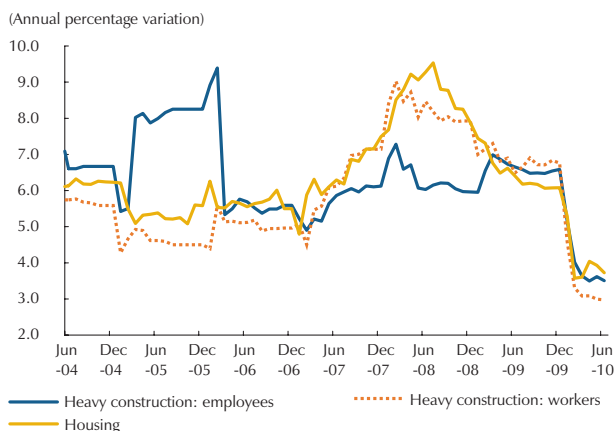


a/ The CCI corresponds to the moving average for three months and the salaried workers corresponds to the seasonally adjusted series.  
 Source: DANE and Fedesarrollo, Banco de la República calculations.

be illustrated more clearly with the close relationship that exists between the number of salaried jobs per capita and the Fedesarrollo consumer confidence index (CCI) (Graph 14). Moreover, although there are various determiners of domestic consumption, the rise in the agents' confidence could explain part of the better growth that this component of the GDP has had in 2010. Therefore, the better access to quality jobs would go hand in hand with the recovery of household consumption to date this year.

In spite of the signs of recovery in labor conditions, the pressures on salaries has been reduced. This has been possible because, in addition to having a market that is still weak with high UR, inflation expectations remain controlled and the adjustment of the minimum salary for this year was low. All of this continues to allow lower and lower increases in salaries. This is compatible with the long term inflation targets.

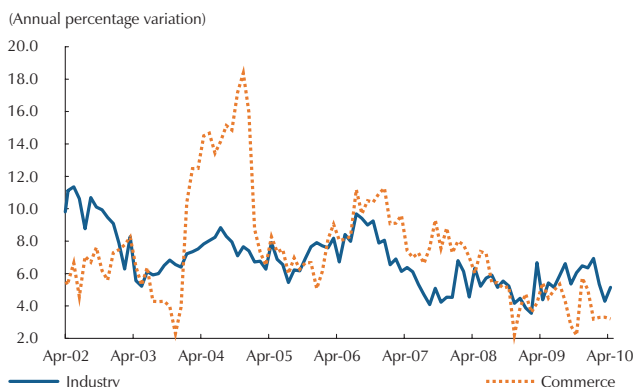
**Graph 15**  
**Index of Nominal Sector Salaries: Heavy Construction and Housing**



Note: workers: skilled worker, unskilled worker, foreman, inspector, surveyor and surveying assistant. Employees: head engineer, assistant engineer, storehouse manager, accountant, guards, mechanics and lab technician.  
 Source: DANE (ICCP, ICCV).

In fact, in June the annual pace of nominal salary adjustment in construction was between 3.0% and 3.9% compared to a range of 3.7% to 4.3% in the first quarter (Graph 15). Likewise, the adjustments in industry and commerce were made in April at an annual rate of 5.1% and 3.3% respectively in comparison to growth of 6.3% and 5.3% annually in the first quarter (Graph 16).

**Graph 16**  
**Index of Nominal Sector Salaries: Industry and Commerce**



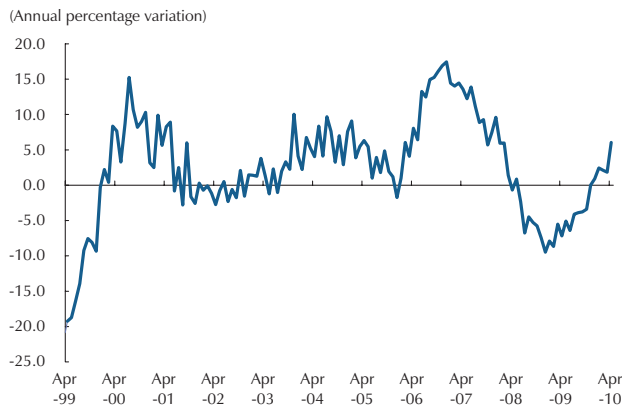
Source: DANE (MMM and MMCM).

For the next few quarters, factors that could put upward pressure on salaries are beginning to appear. In particular, a lower rate of expansion in the labor supply is anticipated which should come hand in hand with a greater demand for workers if the forecasts for economic growth prove well-founded. Likewise, it is believed that expecting the anticipated increases in production to produce gains in productivity, as has been the case up to now in sectors such as the manufacturing industry, will be less and less viable (Graph 17). This will increase the demand for workers even more.

However, there are also factors that will continue to limit salary adjustments. First of all, it is possible that the UR, in spite of the reductions that are anticipated, will remain above what is considered

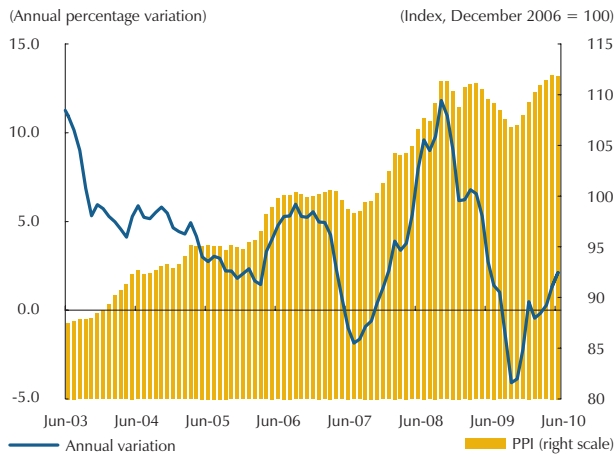
its natural level for the rest of the year (Non-Accelerating Inflation Rate of Unemployment [Nairu]) as is shown in section 1.4 of this report (surpluses of productive capacity and demand pressures). This implies that the labor market will remain relatively weak in the next two quarters. Secondly, it is estimated that the adjustment in the minimum salary will continue to see a significant transmission to the rest of the salaries. This, together with the expected low inflation (which is discussed in the third chapter in this report), will keep salary increases under control.

Graph 17  
Productivity per Hour Worked in Industry



Source: DANE, Banco de la República calculations.

Graph 18  
Total PPI



Source: DANE.

Given these upward and downward pressures, it is believed, in this report, that the nominal salaries will stop their downswing in the next few months. Nevertheless, it is expected that the adjustments will still be relatively low and compatible with the inflation target in 2010 because the probability that salary pressures on inflation will occur in the next few months is low.

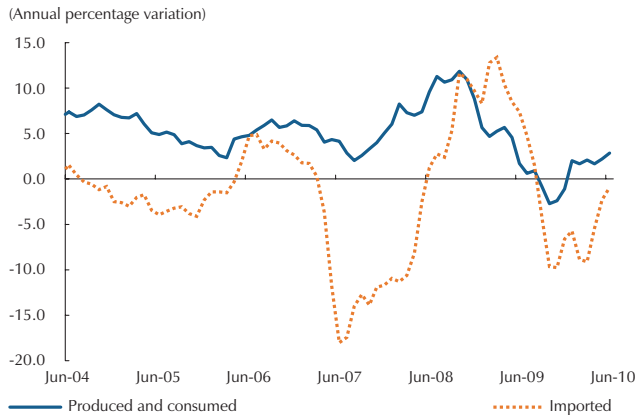
### 3. Other Costs

In the second quarter, the annual changes in the producer prices and in the non-salary costs continued rising slightly and the pressures came from not only the prices for imported goods but also those for national ones, especially fuel and some food items. As a result, annual producer inflation, measured by the producer price index (PPI) surged from -0.2% in March to 2.1% in June (Graph 18).

In spite of the surge in annual inflation, the monthly adjustments for the last few months have been dropping continuously and the PPI has tended to stabilize. In June, monthly inflation was -0.1% compared to 0.5% for April and May and 0.9% for the first quarter on average. Therefore, the recent increase in annual inflation is, more than anything, the result of a low basis of comparison given the significant fall in prices seen in the second quarter of 2009 (Graph 18).

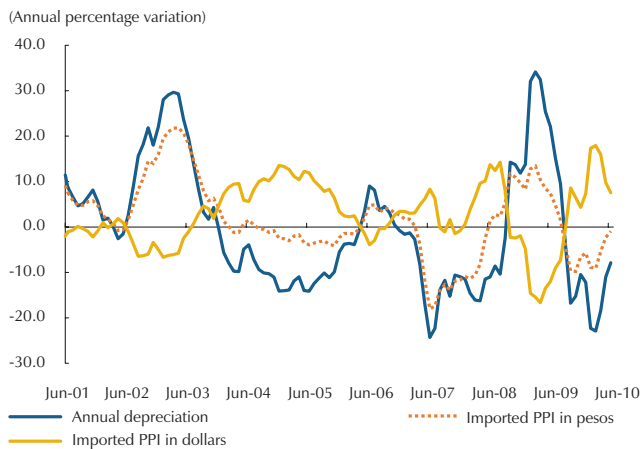
Breaking it down by origin, the increases in the annual variations were seen in both the PPI for imports and that for produced and consumed. These tendencies resulted in the imported component registering an annual change of -0.9% in June in comparison to a -9.1% in March. The national component, in turn, grew at an annual rate of 2.9% compared to 2.1% annually in March (Graph 19).

Graph 19  
PPI by origin



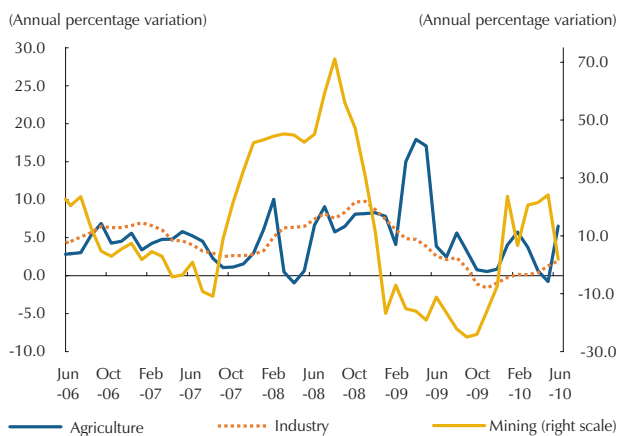
Source: DANE.

Graph 20  
Implicit PPI in Dollars



Sources: DANE, and Financial Superintendency of Colombia, Banco de la República calculations.

Graph 21  
Produced and Consumed PPI by Branches of Economic Activity



Source: DANE, Banco de la República calculations.

The imported PPI continued to be influenced by the appreciation of the peso in the second quarter, which allowed negative annual changes in this indicator (Graph 20). For the rest of the year, it is probable that the imported PPI will begin to show positive annual growth even if the exchange rate remains stable and the prices in dollars do not rise. This is due to the fact that the imported PPI fell during the same period in 2009 and this offers a basis of comparison that is even lower for the second half of the year.

In the case of the produced and consumed goods, the rise in the annual variation in the second quarter was concentrated in the industrial and agricultural-animal husbandry sectors. These went from annual rates of 0.1% and 3.8% in March to 2.0% and 6.7% in June respectively. Again part of these rises is explained by a low basis of comparison. In contrast, the annual change in mineral prices declined between those two months going from 20.6% to 1.9% (Graph 21).

Within the PPI for produced and consumed, the rises in the annual changes were the result of the increases in prices for a limited number of goods. The ones that exercised the most upward pressure were rice, gasoline, tubers, vegetables, bananas and sugar (Table 4). In addition, the price for coffee also contributed significantly, specifically in the month of June. In some cases, these prices were affected by the international prices and, in others, by the effect of the Niño phenomenon.

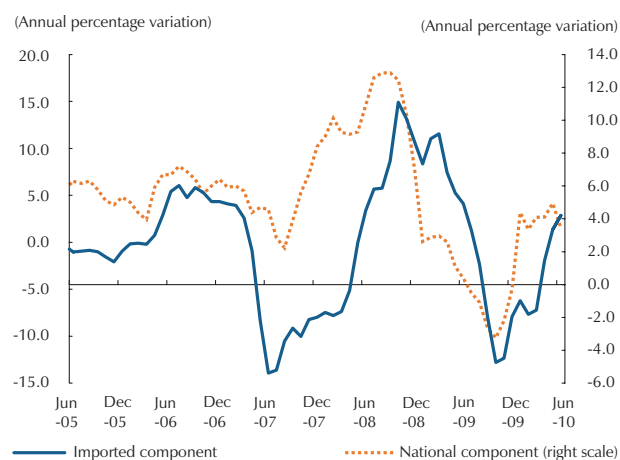
Starting with the PPI and other sources of information, the indices of weighted non-labor costs were estimated using the social accounting matrix (Social Accountability matrix ([SAM])). During the first quarter of the year, the annual change in the imported index reflected a momentum that was similar to the PPI. Thus, the external component that was adjusting as of March at an annual rate of -7.2% did the same thing in June at 2.9%. In contrast, the annual change in the national cost index slowed down a little and went from 4.1% annually in March to 3.4% in June (Graph 22).

Table 4  
Produced and Consumed Contribution to the PPI

	Annual inflation		Contribution to the quarter surge March, 2009 - June, 2010	Participation in the quarter surge March, 2009 - June, 2010
	March, 2010	June, 2010		
Produced and consumed PPI	2.1	2.9	0.8	100.0
Section				
Agriculture	3.8	6.6	0.5	67.3
Mining and Quarrying	20.6	1.9	(1.1)	(142.7)
Industry	0.1	2.0	1.3	174.3
Subclass				
Rice	(23.7)	(8.9)	0.3	38.4
Gasoline for cars	(2.1)	17.6	0.3	38.3
Roots and tubers	37.5	52.7	0.2	29.4
Other vegetables	32.6	56.3	0.2	29.0
Gold and platinum	(2.8)	23.9	0.2	25.8
Fresh plantain and bananas	(10.5)	1.7	0.1	14.2
Unrefined sugar	21.0	33.7	0.1	14.1

Source: DANE, Banco de la República calculations.

Graph 22  
Indices of Non-salary Costs Arising from SAM



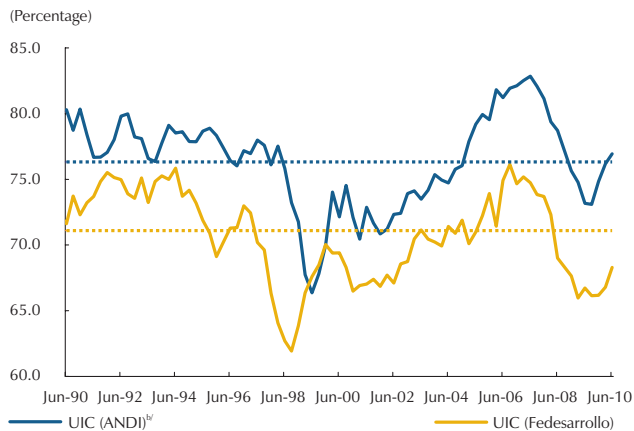
Source: Banco de la República.

In conclusion, the non-salary costs must have exerted a little upward pressure in the second half of the year. For the next few months, if there are no additional increases in the international prices and the exchange rate remains stable, serious inflationary pressures should not be seen except, to some degree, for the effect that the projected rise in fuel could have on producer prices.

#### 4. Surpluses in Productive Capacity and Demand Pressures

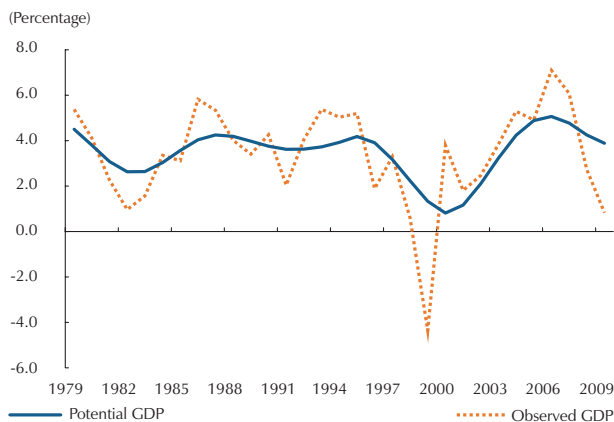
Surpluses in productive capacity (or the balance between production and potential supply) are one of the determiners of inflationary pressures. In 2009 and up to this point in 2010, these surpluses have continued to be important and this has translated into low inflationary pressures that are attributable to the growth in demand and, therefore, to a significant decline in consumer inflation and in the different measurements of core inflation. Over the next few months, production will still remain below the productive capacity thus keeping these pressures on prices under control. However, the recovery that has been seen recently in various measurements of the use of installed capacity

Graph 23  
Use of Installed Capacity (UIC) <sup>a/</sup>



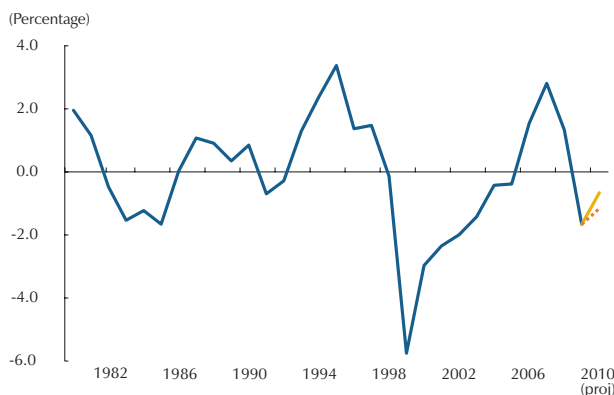
a/ seasonally adjusted series.  
b/ The UIC series of the ANDI is calculated based on the arithmetic average. The data from the second quarter corresponds to the average for April and May.  
Sources: ANDI and Fedesarrollo, Banco de la República calculations.

Graph 24  
Annual Growth of the GDP: Observed and Potential  
(annual average)



Source: DANE, Banco de la República calculations.

Graph 25  
Output Gap  
(annual average)



(proj): projected.  
Source: Banco de la República.

together with the better outlook for growth –as is shown in Chapter III of this report– could result in these demand pressures materializing before they were expected according to the previous reports.

In the second quarter of 2010, the productive capacity indicators of the National Association of Colombian Businessmen (ANDI in Spanish) and Fedesarrollo continued to recover. Nevertheless, there are mixed signals since the information from Fedesarrollo points to a use of installed capacity that is even lower than the historical average while the ANDI indicator shows a stronger recovery that places the indicator above that average. According to Fedesarrollo, the installed capacity was at 66.9% in the second quarter, a figure that is 1.5 pp above the data from the second quarter in 2009 but still 4.2 pp below the historical average. In the case of the ANDI, the utilization of installed capacity was 77.5% in May, 2010, which is 4.3 pp above the same period in 2009 and 1.1 pp above the average of the series (Graph 23).

In addition to the greater use of installed capacity, the stabilization of labor participation caused the UR to decline. However, Bank calculations indicate that the unemployment rate seen today is still above that which is compatible with stable inflation (Nairu). This is an indication that the labor market still has an excess supply. Thus, the factors that are determining the inflationary pressures of slight demand are not only the above mentioned surpluses in productive capacity but also the gap in the labor market.

With respect to the potential output of the economy, it is necessary to make note of the fact that the revision of the GDP series done by DANE did not lead to significant changes in the estimates of potential growth and output gap in the past. Therefore, the calculations done by the Bank indicate a potential growth of between 3.5% and 4.0% for 2009 (Graph 24) as a result of which the GDP gap for this year would have been close to -1.7% (Graph 25).

The economy is expected to have a potential growth in 2010 that is slightly better than the year before, although still within a range of 3.5% and 4.0%. This

is primarily due to the fact that the available information on the new GDP series indicates that investment did not tighten in 2009 as was initially thought (see section B, number 1 of this chapter). This will have a positive impact on the stock of capital and, therefore, on the productive capacity in 2010.

However, it is worth pointing out that this potential growth is lower than what was estimated for the years preceding the international crisis. This is due to the fact that in periods of recession, it is normal to see a less efficient usage of the productive resources, a loss in the qualifications of the labor force and more obsolescence in fixed capital. All of this leads to a lower capacity for potential growth. Furthermore, during the last two years in Colombia, there have been shocks such as the break off of trade with Venezuela which, if it should become permanent, could be identified as a blow to long term growth. All of these circumstances have led to a reduction in the multi-factorial productivity in 2009 and for 2010 according to the Bank's estimates.

Therefore, given the growth in the economy that is expected for 2010 (which is discussed in the third chapter of this report) together with the above mentioned range of potential growth, it is probable that the output gap will tend to close with respect to 2009 more rapidly than was thought in the previous report. However, it will remain in negative territory. Indeed, the Bank's estimates indicate that the GDP gap will be between -1.2% and -0.7% for the year's average (Graph 25).

## **5. Inflation Expectations**

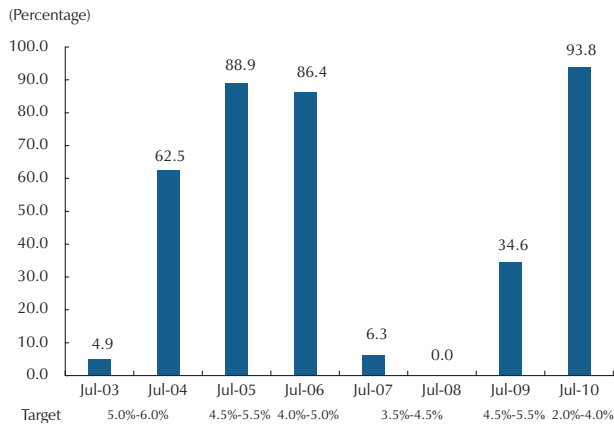
Between March and June, the economic agents kept inflation expectations for different horizons at levels that were compatible with the long term target range that was set by the Board of Directors of the Banco de la República (JDBR in Spanish) (between 2% and 4%). The different indicators available declined with respect to the measurements collected in the previous report although, in the majority of the cases, an upswing of inflation to 3% is still expected in the next few months.

According to the quarterly survey on expectations that the Banco de la República did of a broad range of agents and analysts at the beginning of July 2010, the average inflation expected for the end of 2010 is 3.0% (compared to 3.2% predicted in the April 2010 survey). In the same survey, close to 94% of those consulted expect that inflation will be within the target range fixed by the Board for the end of the year (Graph 26, panels A and B).

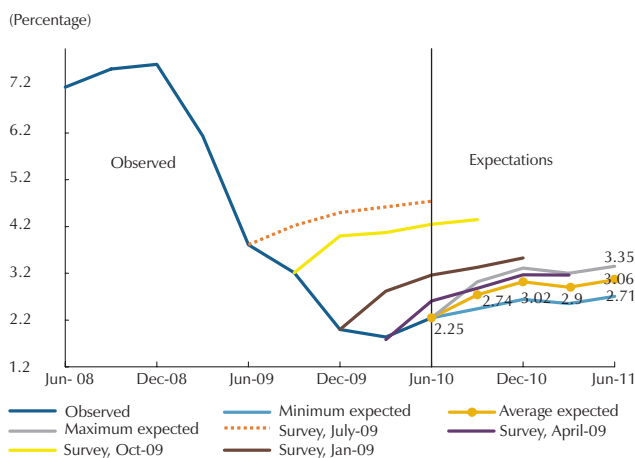
Meanwhile, the monthly survey of expectations done on operators in the financial markets show a total expected inflation for December 2010 of 3.1%, which is below what was reported in the previous *Report on Inflation* (3.3%). This indicator has also been converging with the mid-point of the target range in the last two quarters (Graph 27). For the expectations at the 12-month horizon

Graph 26

A. Inflation Target Credibility as a Percentage for the Years 2003 to 2010  
(Survey done in July each year)

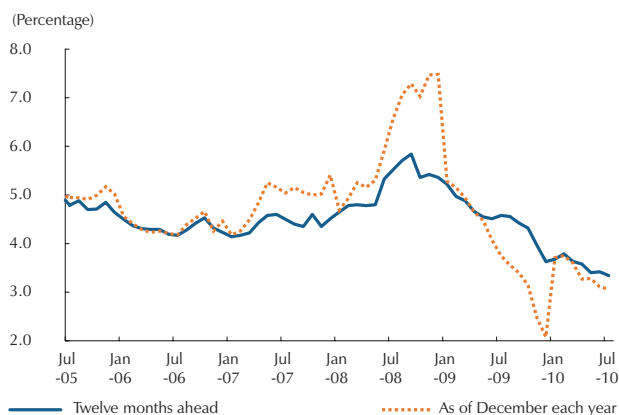


B. Observed Inflation and Inflation Expectations  
(at three, six, nine and twelve months)  
(annual inflation)



Source: Banco de la República.

Graph 27  
Forecast of Annual Inflation According to Banks and Stock Brokers



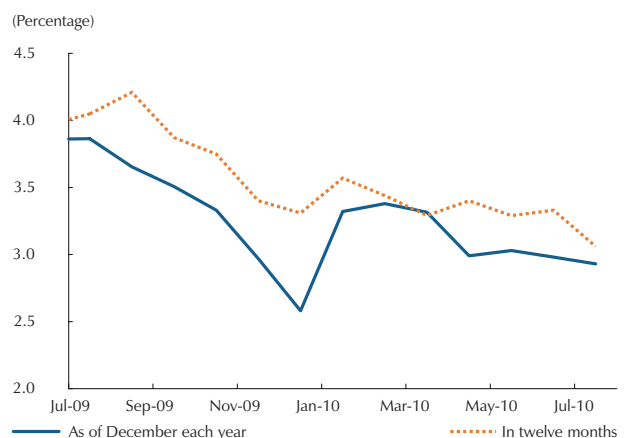
Source: Banco de la República.

(in other words, July, 2011), this same survey shows a value of 3.3%, which is 20 basis points (bp) below the measurement made in April (Graph 27).

In the case of inflation excluding food prices, in the same survey the operators in the financial system expect 2.9% in December this year and 3.1% in July next year (Graph 28). This would imply a 3.4% implicit inflation of food prices as of December this year and of 4.1% in twelve months.

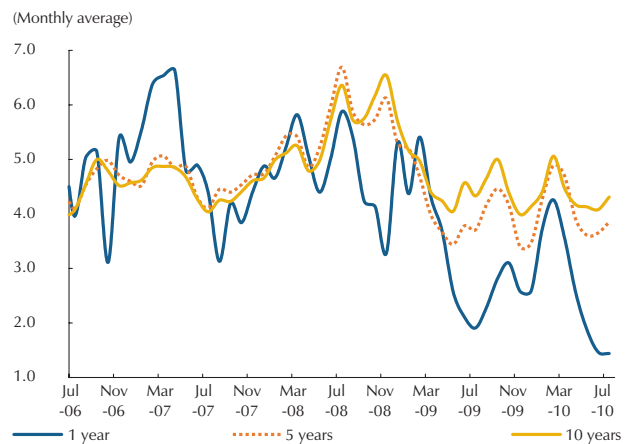
Finally, the average inflation expectations obtained from the TES (with preliminary data from July) were at 1.4%, 3.9% and 4.3% for the 1-, 5- and 10-year securities respectively (Graph 29). These have shown a significant decrease since the beginning of the year with only the implicit ones in the 10-year securities staying at the same level which is slightly above the ceiling of the long term target range (2% to 4%). Although the 5- and 10-year expectations showed a recent rally, the fact that these indicators of expected inflation could be distorted by the liquidity premium for the fixed rate securities and real value unit (UVR in Spanish) –used for adjusting mortgages– as well as by the inflation risk premium should be kept in mind.

Graph 28  
Forecast of Annual Inflation Excluding Food Prices  
According to Banks and Stock Brokers



Source: Banco de la República survey.

Graph 29  
Break-even inflation at one, five and ten years<sup>a/</sup>



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

## Box 1

### MEASURING THE GDP THROUGH CHAINED INDICES

\*Anderson Grajales Olarte

Beginning with the publication of the Gross Domestic Product (GDP) for the first quarter of 2010, the methodology of chained indices to calculate the GDP in real terms was adopted by DANE. In particular, the Laspeyres chained index was implemented to measure the changes in volumes of production. This constitutes an important improvement with respect to the method used previously (the non-chained Laspeyres index) because it makes it possible to measure the changes in the GDP and its components at constant prices more precisely. Furthermore, this new calculation method allows DANE to make their estimates compatible with those of most developed countries by following the most recent international recommendations.

The strength of the current values in the different economic aggregates depends on the behavior in prices and the quantities of their components. For analysts and policymakers, it is important to determine what portion of the change that occurred at current prices can be attributed to changes in prices and what percentage corresponds to variations in quantities (real growth). The indices of prices and quantities are mathematical tools that make it possible to do this breakdown (Lora, 2008). Below there is a brief description of the characteristics of the indices of quantities that are used the most in their traditional version as well as the characteristics of the new methodology implemented by DANE.

#### 1. Laspeyres Index

Before the 2005 base, DANE used the Laspeyres index to calculate the GDP in real terms. This index is the most useful on a practical level because the variations are calculated with respect to a fixed base period (Lora, 2008):

$$Laspeyres_Q = \sum_{i=1}^n \left( \frac{q_i^t}{q_i^0} \right) \times \frac{p_i^0 q_i^0}{\sum_{i=1}^n p_i^0 q_i^0} = \frac{\sum_{i=1}^n p_i^0 q_i^t}{\sum_{i=1}^n p_i^0 q_i^0} \quad (1)$$

\* Expert on inflation at Department of Inflation and Macroeconomic Programming. I would like to thank Adolfo Cobo and Jose David Pulido for their comments. The opinions expressed are responsibility of the author and do not involve Banco de la República or its Board of Directors.

where  $p$  represents the prices and  $q$  the quantities; the subscripts represent products ( $i = 1, \dots, n$ ) and the superscripts represent the periods. That being the case, this index is defined as the weighted arithmetic mean of the quantities when the values of the reference periods (0) are used as the weighting figures. It is also defined as the change in the value (growth or decline) of a basket with quantities that are those of the current period ( $t$ ), but valued at the prices of the reference period (0).

In spite of its usefulness, it is important to keep to its limitations in mind when using the Laspeyres index (Landefeld and Parker, 1997).

- The calculated growth is sensitive in relation to the year that is taken as the base. This is because the prices which serve as weighting are not the same every year. Thus, for instance, the prices can vary greatly between a period of crisis and one of economic expansion.
- The growth has an upward bias: this result, which is also known as *substitution bias* generally occurs because the goods that grow the most simultaneously register decreases in their prices. As a consequence, the Laspeyres index gives an inflated value to these goods in period  $t$  because it does not take into account their decrease in price.

As noted by Lora (2008), the above makes it possible to conclude that the Laspeyres index of quantities is an appropriate method for short periods, but not for long ones. In order to offset the above mentioned limitations to some degree, the statistics institutes usually update the base periodically (every five or ten years). However, the change of base brings with it a historical revision of the growth and even when it is done, the biases can remain for the periods in which extreme changes of prices were recorded.

#### 2. Paasche Index

The Paasche index of quantities differs from the prior one in that it uses a weighted harmonic mean instead of an arithmetic mean for the calculations, and in addition, in that the reference period is not 0 but rather, the current period ( $t$ ).

$$Paasche_Q = \left[ \sum_{i=1}^n \left( \frac{q_i^t}{q_i^0} \right)^{-1} \times \frac{p_i^t q_i^t}{\sum_{i=1}^n p_i^t q_i^t} \right]^{-1} = \frac{\sum_{i=1}^n p_i^t q_i^t}{\sum_{i=1}^n p_i^t q_i^0} \quad (2)$$

This type of index is more difficult to calculate because it requires having the prices of the different goods and services for the current period. Also, the structure of the Paasche index shows a bias that is opposite of that of the Laspeyres index and therefore it tends to underestimate the growth.

### 3. Fisher Index

Generally, the Laspeyres and Paasche indices set an upper and a lower bound to the growth measurements respectively. In fact, it can be demonstrated that:

$$Laspeyres_Q > Paasche_Q \quad (3)$$

if the relative prices are negatively correlated to the relative quantities (Siegel, 1941), which is consistent with the hypothesis of consumers who evaluate prices in order to replace goods based on their prices.<sup>1</sup>

Thus, an *ideal* index would be the one make it possible to calculate a growth that would be at a mid-point between the two previous indices (reducing the bias) in such a way that it would simultaneously and symmetrically use the weighting for both the reference and the current years. The Fisher index has this characteristic because it is constructed as the geometric average of the Laspeyres index (with weighting of the reference year) and the Paasche index (with weighting of the current year).

$$Fisher_Q = \sqrt{\frac{\sum_{i=1}^n p_i^0 q_i^t}{\sum_{i=1}^n p_i^0 q_i^0} \times \frac{\sum_{i=1}^n p_i^t q_i^t}{\sum_{i=1}^n p_i^t q_i^0}} \quad (4)$$

### 4. Chained Laspeyres index

The previous indices, due to their fixed reference period (0,  $t$  or an average of both), have a strong limitation that becomes more evident as the time between the period of analysis and the period of reference grows longer. This happens because the weighting used (given that they are fixed), in this case, the prices, generally loses relevance due to the fact that the price structure of the economy can vary visibly (SNA 2008).

The statistics institutes can essentially avoid this problem by using two methods. The first was mentioned in the case of the Laspeyres index but can be applicable to the other indices as well. It consists of updating the period of reference periodically in spite of the difficulties generated by doing so.

The second one is to use indices of chained quantities in order to calculate the real growth. This methodology consists of the constructing indices for consecutive periods by using the weightings of the adjacent periods as a basis to calculate the growth. Afterwards, these variations are “chained” (multiplied) to form a time series. Thus, the indices of chained quantities can be assembled from the non-chained version of the different indices mentioned above. Specifically, the formula for calculating the chained indices of Laspeyres and Paasche for the period  $t > 1$  is shown as follows:

$$Laspeyres_{QC} = \frac{\sum_{i=1}^n p_i^0 q_i^t}{\sum_{i=1}^n p_i^0 q_i^0} \times \frac{\sum_{i=1}^n p_i^1 q_i^2}{\sum_{i=1}^n p_i^1 q_i^1} \times \dots \times \frac{\sum_{i=1}^n p_i^{t-1} q_i^t}{\sum_{i=1}^n p_i^{t-1} q_i^{t-1}} \quad (5)$$

$$Paasche_{QC} = \frac{\sum_{i=1}^n p_i^1 q_i^1}{\sum_{i=1}^n p_i^1 q_i^0} \times \frac{\sum_{i=1}^n p_i^2 q_i^2}{\sum_{i=1}^n p_i^2 q_i^1} \times \dots \times \frac{\sum_{i=1}^n p_i^t q_i^t}{\sum_{i=1}^n p_i^t q_i^{t-1}} \quad (6)$$

Notice that for the period 1 the chained indices in both cases correspond to the versions of the non-chained (1) and (2) respectively.<sup>2</sup>

The calculation method of the chained indices represents more precisely the structure of the economy because it does not depend on a fixed period of reference but on weightings that change over time and, therefore, the substitution bias present in the non-chained indices can be eliminated (Hill, 1988). At the same time, this methodology prevents the “rewriting” of the history of economic growth as a result of updating the base, as happens in the case of the fixed weighted indices.

Nonetheless, this important improvement has some associated costs such as the lack of additivity.<sup>3</sup> In other words, the sum of the chained values of each one of the components is not equal to the chained aggregate value. The difference between the two figures is known of as a statistical discrepancy and it is a purely mathematical result

1 The direction of the inequality changes when the correlation between the relative quantities and the relative prices is positive. For instance, this would be the case of companies that fix prices when they replace products they sell for others that can be offered at higher prices (Schreyer, 2004).

2 In order to avoid repetition, the Fisher chained index is not shown, but the analysis is equivalent.

3 A detailed analysis of the advantages and disadvantages of the chained indices can be found in Hill (1999) and Szulc (1983).

that arises because, in this methodology, the components and the aggregate are chained separately. In spite of the fact that the existence of the discrepancy (which does not take place when a fixed base index such as Laspeyres is used) causes criticism of the chaining method, this is a minor disadvantage which is greatly offset by getting a more representative measurement of growth.

## References

- Hill, P. (1988). "Recent Developments in Index Number Theory and Practice", OECD Economic Studies núm. 10, París: OECD.
- Landefeld, J. S.; Parker, R. P. (1997). "BEA's Chain Indexes, Time Series, and Measures of Long-Term Economic Growth", *Survey of Current Business*, Bureau of Economic Analysis, mayo.
- Lora, E. (2008). *Técnicas de medición económica. Metodología y aplicaciones en Colombia* (4 ed.), Bogotá: Alfaomega Grupo Editor.
- Siegel, I. (1941). "The Difference between the Paasche and Laspeyres Index-Number Formulas", *Journal of the American Statistical Association*, vol. 36, núm. 215 (Sep., 1941), pp. 343-350.
- Schreyer, P. (2004). "Chain Index Number Formulae in the National Accounts", document presentado al 8th OECD-NBS Workshop on National Accounts, 6 al 10 de diciembre, París: OECD Headquarters.
- System of National Accounts [SNA] (2008). European Commission, International Monetary Fund, Organization for Economic Co-operation and Development, United Nations y World Bank.
- Szulc, B. J. (1983). "Linking Price Index Numbers", Erwin Diewert y Claude Montmarquette (eds.), *Price Level Measurement*, Statistics Canada.

## II. FINANCIAL MARKETS

**During the second quarter**, the problems with sovereign debt in Europe generated a rise in the international perception of risk, sharp plunges in the stock market and liquidity pressures.

**The measures the euro zone economic authorities and the IMF took** in May contributed to improving the panorama.

**In the domestic market, credit continues to recover**, interest rates are still falling and assets are rising in value.

**The better outlook for credit and the low** interest rates will contribute to the recovery of the economy.

### A. FOREIGN MARKETS

In the second quarter of the year, the uncertainty in the global financial markets continued. The sovereign debt problems in some European countries, which worsened with the Greek crisis in April and May, caused a significant upswing in the risk perception, plunges in the international stock markets, liquidity pressures in some interbanking markets and a depreciation of the euro. Likewise, significant declines in the international prices for commodities were registered.

In view of this, the euro zone economic authorities and multilateral entities such as the International Monetary Fund (IMF) adopted an unprecedented aid package,<sup>4</sup> which included announcements on the part of each one of the

---

<sup>4</sup> The European Commission, the European Central Bank and the IMF made a commitment to give Greece financial aid under strict requirements and the commitment to comply with the adjustment program under way. Thus, these entities will give the government €110,000 within the next three years to guarantee the country's solvency. Moreover, they announced a rescue package of €750,000 of which €250,000 are provided by the IMF to help the countries in the euro zone who are facing problems refinancing their debt.

countries about fiscal consolidation policies. This served to counteract the loss of confidence in some of the European countries and to stabilize the financial system thus preventing a major breakdown in the credit channel.

In spite of the effectiveness these measures have had in the short term, serious doubts still persist in the market about the sustainability of the public finances

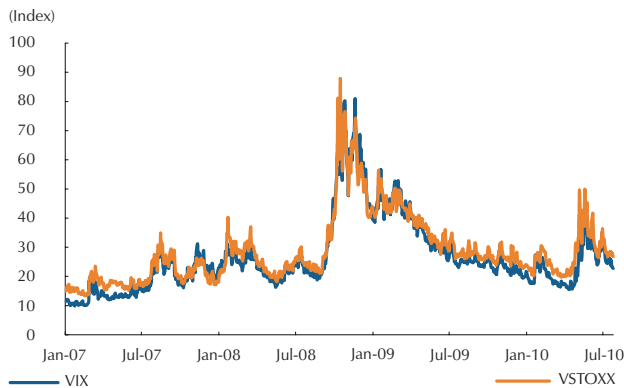
of several countries and about how the adjustment programs could affect economic growth in the medium term. This negative perception has been reflected in the indicators of volatility (e.g. the VIX and the VSTOXX), which are remaining at relatively high levels in spite of the declines in the last month and a half (Graph 30).

The greater uncertainty also produced tensions in the liquidity conditions starting in April, which disrupted the substantial improvements that had been achieved since the end of 2009 after the serious deterioration that was caused by the international financial crisis (Graph 31). The tensions became much stronger in the US market since many European banks preferred to keep their positions in dollars thus generating huge needs for liquidity. To face these difficulties, the European Central Bank put into effect mechanisms such as the lines of liquidity or *swaps* with the US Federal Reserve (Fed) and re-established the liquidity provisions in euros with longer term refinancing. Furthermore, they provided support for the debt markets through the purchase of both public and private securities in the secondary markets.<sup>5</sup> As a result of these measures, the liquidity conditions have improved a little in the last few weeks.

In this environment, investors liquidated risky positions in not only variable income but also public debt securities from European countries with high levels of indebtedness and went into assets that are considered safer (for example, debt securities of the

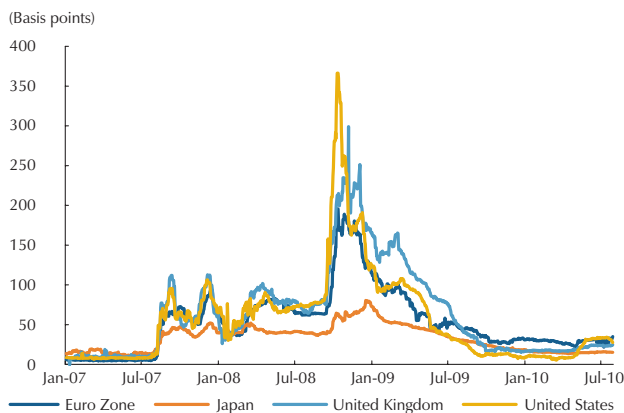
United States and Germany). This situation, which is called flight to quality, generated a substantial fall in the medium and long term interest rates in those economies (Graph 32). The result in the last month and a half was a decrease in the steepness of the curves for public debt securities of economies such as the United States, the United Kingdom, Germany and Japan (Graph 33). The fact

Graph 30  
Indicators of Volatility in Developed Economies<sup>a/</sup>



a/ VIX (volatility index) is a financial indicator that measures the ratio of volatility to the United States S&P 500 options while the VSTOXX does something similar for the euro zone EURO STOXX 50.  
Source: Bloomberg.

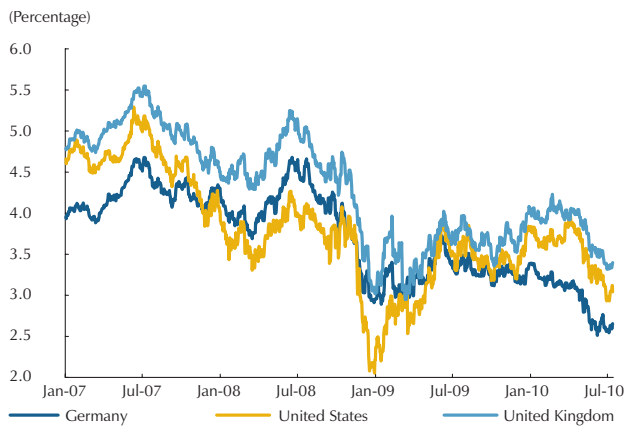
Graph 31  
Differential in the Rates in the Interbanking Markets  
(Libor vs. OIS)



Source: Bloomberg.

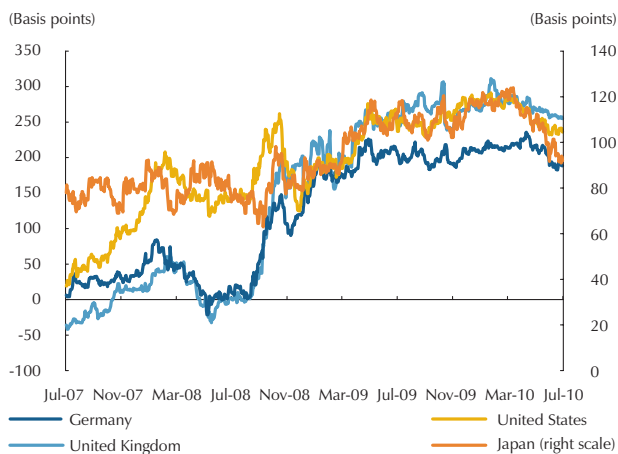
5 These purchases have been sterilized to prevent a change in the monetary posture.

Graph 32  
Interest Rates for 10-year Public Debt Securities from Some Developed Countries



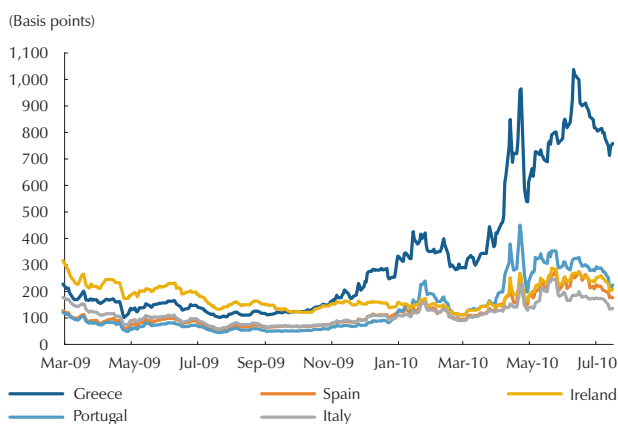
Source: Bloomberg.

Graph 33  
Spread Between 10- and 2-year Public Debt Securities



Source: Bloomberg

Graph 34  
5-year Credit Default Swaps (CDS) for some European Countries



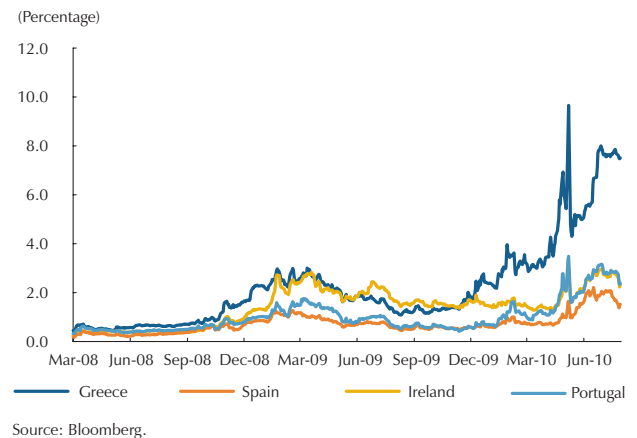
Source: Bloomberg.

that the leveling is due to the fall in the long term rates and not to increases in the short term tranche should be kept in mind since the monetary policy in these countries remains lax and the benchmark rates are staying at levels that are close to zero.<sup>6</sup>

With respect to the European economies that have higher levels of public indebtedness (Greece, Portugal, Ireland, Spain and Italy), even though their sovereign debt premiums dropped in the month of July, they remain at significantly high levels and above those seen in the preceding quarter. This generated upward pressure on the medium and long term interest rates for the public debt securities in contrast to what happened in the United States and Germany. In the case of Greece, for example, their sovereign debt lost its investment grade rating at the beginning of April while in Portugal and Spain there was a significant decline in their rating (Graphs 34 and 35).

The greater uncertainty also moved into to the stock and foreign currency markets. In the first case, the majority of the developed countries' indices registered sharp plunges, especially those of the most indebted European countries. In the case of the United States and German markets, however, the losses were lower, partly because of

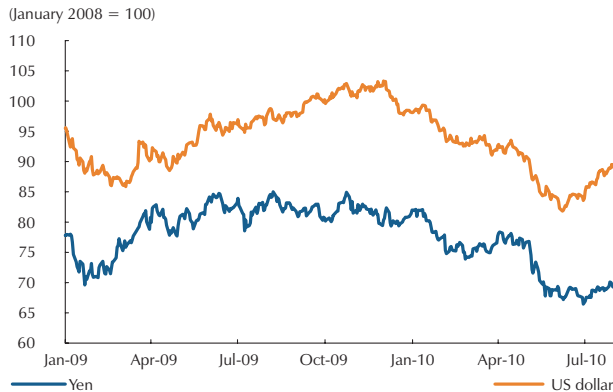
Graph 35  
Differential with Germany in the 10-year Sovereign Debt



Source: Bloomberg.

6 Some developed economies such as Canada, Sweden, Norway and Australia raised their rates during the quarter.

Graph 36  
Performance of the Euro  
(Local currency per euro)



Source: Bloomberg.

the improvements in the financial states that had been reported by companies in those countries. With respect to the foreign currency market, in April and May growing doubts about the stability of the euro have appeared although some improvement in this situation has been seen since mid-June (Graph 36).

Behind the nervousness of the markets about the debt crisis in several European countries, there are the fears of it possibly spreading to the rest of the developed countries given the multiple interconnecting channels between them. One particularly important channel is related to the high degree of exposure that the financial systems of many of the healthy countries have to Greek assets and to the other four economies that are having

problems. France, Germany and the United States have the highest exposure to the Greek banking sector (Table 5).<sup>7</sup> Nevertheless, these proportions are relatively small compared to the size of their total assets.

Table 5  
Bank Holdings of Greek and Southern European Assets

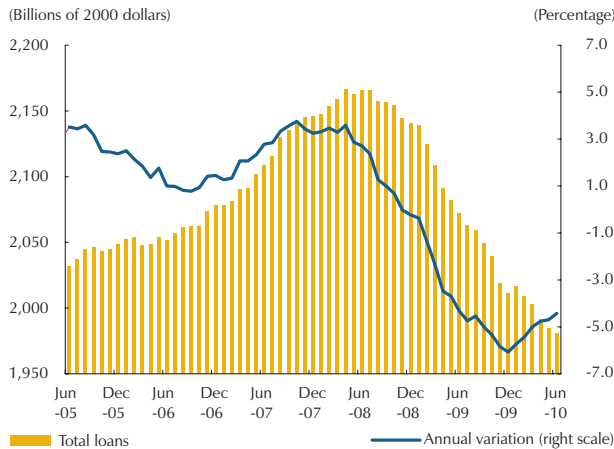
	France	Germany	United States
Holdings of Greek assets			
Value (billions of dollars)	78.8	45.0	16.6
Share of the external requests of the banking sector in the total (percentage)	2.1	1.4	0.7
Share of the total assets of the banking sector (percentage)	0.8	0.5	0.1
Holdings of Greek, Portuguese and Spanish assets			
Value (billions of dollars)	334.9	330.4	79.3
Share of the external requests of the banking sector in the total (percentage)	9.1	10.1	3.2
Share in the total assets of the banking sector (percentage)	3.6	3.7	0.6

Sources: BIS Locational and Consolidated Banking Statistics, April 2010 and Organization for Economic Co-operation and Development (OECD) Banking Statistics, 2009.

There would be a more serious problem if losses also arose in the assets from Portugal and Spain since the impact on the banks' capital could be greater. Specifically, France and Germany seem to be more exposed since the share of Greek, Portuguese and Spanish assets in the total amount of loans granted by

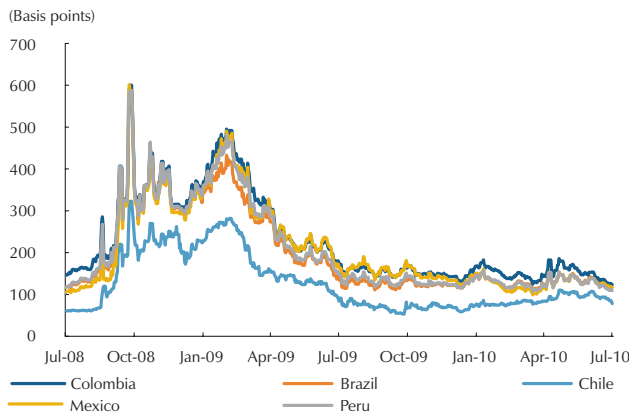
<sup>7</sup> These exposures do not refer to just the government bonds but also include other loans that could represent significant quantities as in the case of France where a fifth of the total loans in Greece are with French banks.

Graph 37  
Total Consumption Loans in the United States



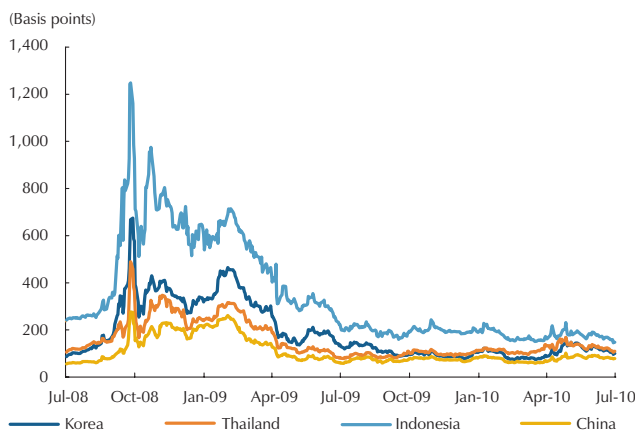
Source: St. Louis Federal Reserve.

Graph 38  
5-year Credit Default Swap (CDS) in Latin America



Source: Bloomberg.

Graph 39  
5-year Credit Default Swap (CDS) in Asia



Source: Bloomberg.

their banks is around 9.1% and 10.1% respectively. Meanwhile, in the United States the share of these assets is only 3.2% (Table 5).

In July, the economic authorities in the euro zone did stress testing<sup>8</sup> to evaluate the European financial entities' resilience capacity and solvency with respect to changes in the economic outlook. The results showed that the capital needs of many European banks were lower than what had been expected and that only 7 of the 91 entities that were tested would have to collect a total of €3.500 m in additional funds.

In addition to the problem of European debt, in the second quarter the developed economies continued to suffer from the credit freeze which was triggered at the beginning of the crisis in 2008. This is hindering a faster economic recovery, especially with respect to consumption. Even though the most recent surveys on the standards used by the commercial banks to grant loans are showing some improvement in this area, the credit channel is still far from being fully re-established. In fact, loans intended for consumption in the United States during the first few months of the year continued to tighten at annual rates of 4% (Graph 37). Likewise, although the form of credit that non-financial companies use for financing through commercial paper has improved, that for financial entities and securitizations remains at a standstill.

With respect to the financial markets in emerging countries, although the majority of the governments carried out counter-cyclical fiscal policies, this did not seriously deteriorate their balances due to the fact that their risk premiums have remained stable and have even seen declines recently. In some cases, they have gone down to points that are below the levels they were at before the 2009 crisis (Graph 38 and 39). Inflation control, fiscal discipline, the lower macroeconomic imbalances, the lower

8 More detailed information on the results of the stress test can be found at Committee of European Banking Supervisors (<http://www.c-eps.org/EuWideStressTesting.aspx>).

exposure of their banking systems and the lower level of consumer, business and government indebtedness are the reasons behind the confidence that these nations have received and their access to foreign financing in the midst of the financial turbulence seen in 2008 and 2009.

The strength of the more vigorous growth in emerging countries (see chapter III) has led some central banks to change their posture. In Latin America, Brazil, Chile and Peru have raised their rates by 200, 100 and 75 bp respectively. Meanwhile, in Asian countries such as India and Korea the same thing has also been seen and their reductions have been 100 and 25 bp respectively (Table 6).

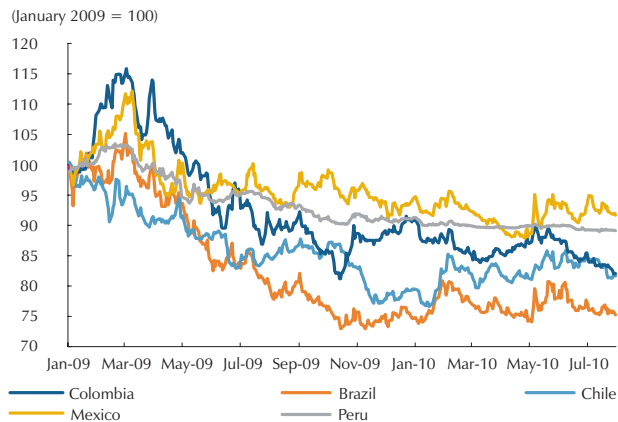
Table 6  
Central Bank Benchmark Interest Rates

Country	Current level	Last change	Change in the current posture (pp)
United States	0 - 0.25	16 Dec 08 (-87.5 bp)	-500
Canada	0.75	20 Jul 10 (+25 bp)	+50
Euro Zone	1.00	7 May 09 (-25 bp)	-325
United Kingdom	0.50	5 Mar 09 (-50 bp)	-525
Australia	4.50	4 May 10 (+25 bp)	+150
Japan	0.10	19 Dec 08 (-20 bp)	-40
Brazil	10.75	21 Jul 10 (+50 bp)	+200
Mexico	4.50	17 Jul 09 (-25 bp)	-375
Colombia	3.00	30 Apr 10 (-50 bp)	-700
Peru	2.00	8 Jul 10 (+25 bp)	+125
Chile	1.50	15 Jul 10 (+50 bp)	+100
Sweden	0.50	1 Jul 10 (+25 bp)	+25
Czech Republic	0.75	6 May 10 (-25 bp)	-300
Hungary	5.25	26 Apr 10 (-25 bp)	-625
Russia	2.75	31 May 10 (-50 bp)	-525
India	5.75	27 Jul 10 (+25 bp)	+100
China	5.31	22 Dec 08 (-27 bp)	-216

Sources: Bloomberg and JP Morgan.

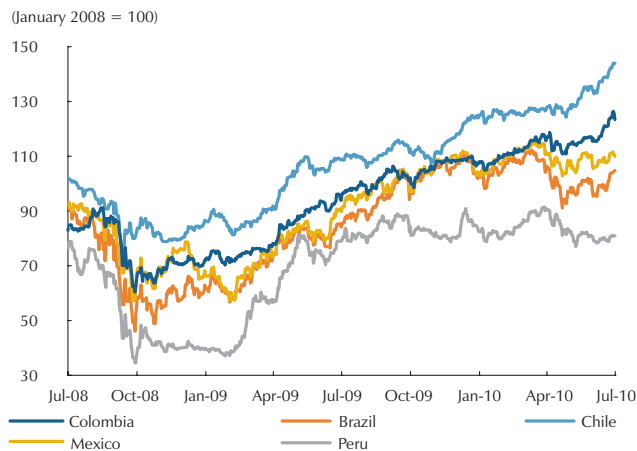
The performance of emerging countries' currencies has been mixed. Specifically, so far this year in Latin America, a depreciation of the Brazilian real, and the Chilean peso has been seen while in Mexico and Colombia an appreciation was registered (Graph 40). In the case of the Colombian peso, its appreciation with respect to the dollar came to 12% in the January-July period. One important news item in the foreign exchange markets was the announcement by the Chinese monetary authorities that they were going to make their currency more flexible. This will help to close the worldwide macroeconomic imbalances a little since the expected appreciation of the yuan will make it possible to reduce the surplus that this economy has had in the last few years.

Graph 40  
Indices of the Nominal Exchange Rate in Some Latin America Countries  
(Local currency per dollar)



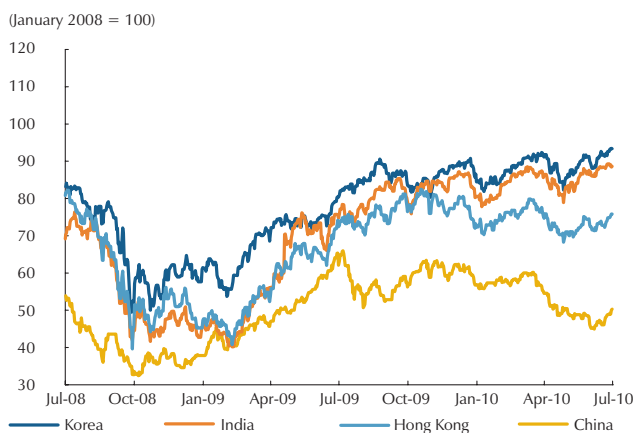
Source: Bloomberg.

Graph 41  
Stock Market Indexes for Some Latin American Countries



Source: Bloomberg.

Graph 42  
Stock Market Indexes for Some Asian Countries



Source: Bloomberg.

The financial turbulence in Europe has not affected the public financing of the countries in Asia or Latin America and has had a minor impact on the stock markets. Latin America has been one of the regions that has been the least affected and the stock market performance in Brazil and Colombia has been outstanding having amply surpassed that of the developed countries (Graph 41). In the Asian countries excluding China, there were some drops so far this year (Graph 42) while in China the worries about the economy heating up, the fears of “bubbles” in the asset prices and some inflationary pressures have generated a more pronounced deterioration in the stock market performance since the end of last year.<sup>9</sup>

Thus, the strengthening of the emerging economies and the lower risk perception seen with respect to them will continue to reactivate the capital flows towards them. Nevertheless, as the World Bank has said,<sup>10</sup> the possibility that the greater financing needs of developed countries will counteract the strength of the capital flows towards emerging economies in the future cannot be ruled out. This is due to the fact that more competition for resources could increase their cost for the developing economies.

## B. DOMESTIC FINANCIAL MARKETS

In their April 30, 2010 meeting, the Board of Directors agreed to reduce the policy interest rate by 50 bp, thus placing it at 3.0%. This decision was framed within an environment of not only low inflation but also inflation which was less than expected and of expectations that are within the target range established by the Board. The decision was also made within a context of economic recovery and of the domestic financial market in line with what had been registered in the first quarter of the year. Loan activity continued to improve, the

9 Between January and June 2010, the Chinese stock market fell around 27%.

10 The World Bank, Global Economic Prospects Summer: Fiscal Headwinds Recovery, 2010.

expansion of the deposit market was maintained, interest rates sank and the stock markets and public debt securities appreciated.

The strengthening of loan activity in the second quarter of the year has been seen in the growth surge for mortgage and consumer portfolios. Furthermore, the constant rise in the balances of the commercial loan portfolio in contrast to their shrinking in the second half of 2009 made it possible to return to the higher levels reached the year before. It is probable that this situation will remain as it is in the second half of the year given the rally in economic activity and the better disposition the agents in the loan market have as has been shown in several surveys.

The deposits, in turn, have seen stable growth and this has given the intermediaries an appropriate availability of resources. This has made it possible to reduce the costs of funding, lower the lending rates, raise credit and enlarge the investment portfolios. It should be noted that in regards to the distribution of the financial system assets, credit has gained importance with respect to investments.

In addition to the greater strength of commercial lending in pesos, other forms of financing for the real sector have been seen in the last three months. These include the placing of corporate bonds although their size was less than it was during the same period last year. Indebtedness in foreign currency, in turn, continues to recover and as of June, positive rates of growth are now being seen. This is consistent with the better performance of foreign trade and, especially, imports.

## 1. Monetary Aggregates

Up to this point in the year, the growth of the demand for primary liquidity has surged and that of the monetary aggregate (M3) remained stable. The annual rise in the average monthly base money went from 5.2% in December to 11.8% in June. This performance is because of the greater strength of the demand for

cash which saw an expansion rate of 11.2% in June compared to 5.4% in December last year. Likewise, the bank reserves rose during the period and went from 4.9% at the end of 2009 to 13.0% in June 2010. This buoyancy in the reserves is partly due to the higher share of demand deposits which are subject to a higher reserve requirement (Graph 43).

In the second quarter in particular, the demand for base money rose COP\$2.716 billion (b) which was the result of COP\$4.366 b in liquidity operations done by the financial system, the purchase of US\$1.200 m in foreign currency (equivalent to COP\$2.341 b) and the contraction that the operations with the government produced. The latter corresponded to the increases of COP\$2.914 b in the deposits made by

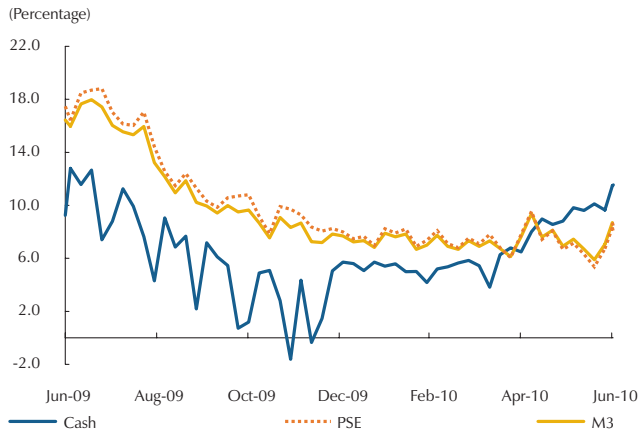
Graph 43  
Monetary Base by Use  
(annual variations of monthly averages)



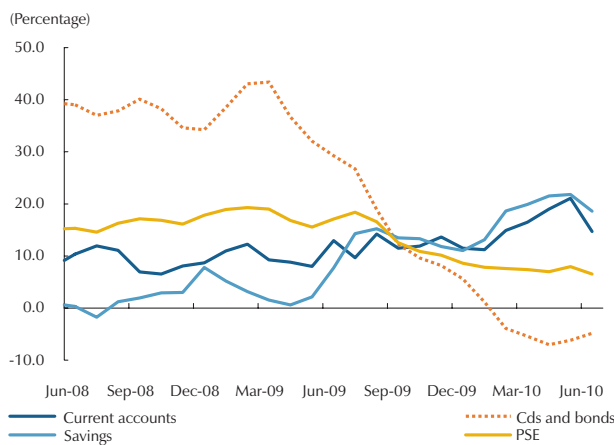
Source: Financial Superintendency of Colombia, Banco de la República calculations.

Graph 44

A. Monetary Aggregates  
(Annual variations of the weekly data)

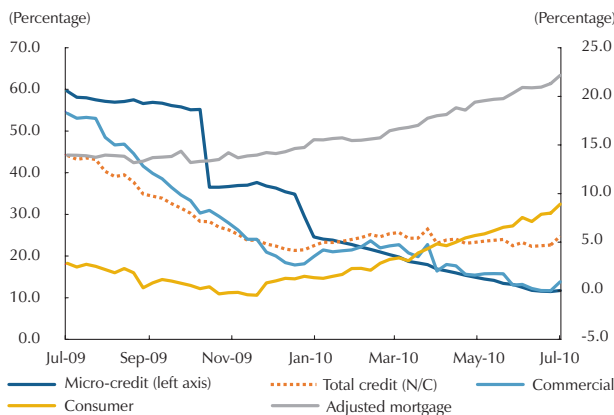


B. Total Deposits and their Main Components  
(Annual variations of the weekly data)



Source: Financial Superintendency of Colombia, Banco de la República calculations.

Graph 45  
Gross Loan Portfolio with Leasing (N/C)  
(annual variations of weekly data)



Source: Financial Superintendency of Colombia, Banco de la República calculations.

the National Treasury and COP\$1.250 b in sales and maturities of TES.

The broader monetary aggregate, made up of cash and PSE, registered a relatively stable annual growth of close to 7.3% over the course of the first half of the year. This trend was led by the liabilities subject to reserve requirements (PSE in Spanish) which had an average annual hike in the quarter of 7.4%. In real terms (deflating by the CPI excluding food), M3 and PSE grew about 4.5% and 4.6% respectively. This expansion is consistent with the expected economic activity (Graph 44, panels A and B).

Meanwhile as of June, the savings deposits and current accounts showed annual upswings of 18.6% and 14.7% respectively (for the average monthly balances). In contrast to that situation, the term deposits (CDs and bonds) showed negative annual changes of close to 5% (Graph 44, panel B). However, it is important to be aware that in May and June, unlike the previous months, term deposits contributed 82% of the total increase in total deposits (COP\$2.3 trillion [t]).

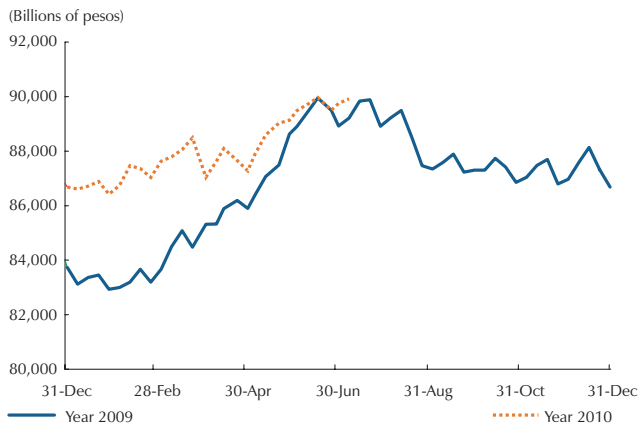
## 2. Credit

During the first and second quarter of the year, the gross loan portfolio in national currency registered a moderate recovery. The growth rate was 5.6% in June compared to 4.9% in March and 4.6% in December. As a result, the portfolio took up a larger share within the assets of the financial brokerage entities as it went from 63.0% to 64.3% between January and May in contrast to what has been happening since the beginning of 2007.

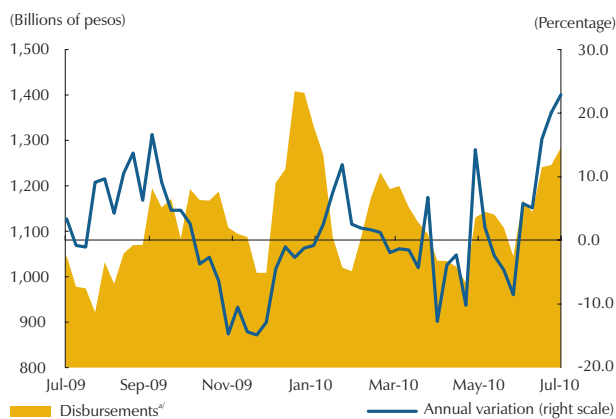
The better credit strength has been led by the adjusted mortgage portfolio (including the securitizations) which, so far this year, has seen its annual rate of growth surge from 15.5% to 22.2%. The consumption loan portfolio is in second place. The annual rate of change for this portfolio went from 1.3% to 8.9% in the same period (Graph 45). This momentum could stay the same for the rest of the year given the favorable expectations that the consumers have of their economic situation and the

Graph 46

A. Commercial Portfolio and Leasing  
(Weekly balances)

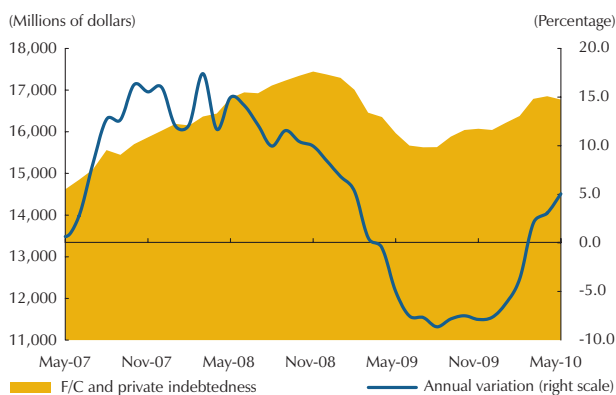


B. Ordinary Credit <sup>a/</sup> N/C



a/ Weekly disbursements order 4 moving average  
Source: Financial Superintendency of Colombia, Banco de la República calculations.

Graph 47  
F/C Portfolio Aggregate and Non-financial Private Sector  
Foreign Indebtedness  
(Monthly data)



Sources: Financial Superintendency of Colombia and Banco de la República, Banco de la República calculations.

greater predisposition they show towards purchasing durable goods and housing as suggested by the consumer opinion survey done by Fedesarrollo.

With respect to the commercial loan portfolio, even if it has shown a low rate of growth to date this year and standing at 0.9% annually at the close of June, its performance for what is left of the year begins to look as if it might be more positive due to two factors. The first one is statistical, associated with the low base of comparison that resulted from the contraction seen during the second half of 2009 (Graph 46, panel A). The second is due to the improvement in the confidence of both lenders and borrowers (see the highlighted section on the following page), which is already being seen reflected in the recent boost given to the disbursements of ordinary credit (Graph 46, panel B).

With respect to the business financing other than domestic commercial loans, the placements of corporative bonds were significant in the first half of the year and came to COP\$2.4 t. However, compared to those from the same period in 2009, they were 9.7% lower. The issuing of corporative bonds this year was concentrated in March and April (71%).

Finally the recovery from indebtedness in foreign currency is becoming more secure and this trend will probably continue if imports keep on growing as expected. Corporate foreign indebtedness, which includes not only direct foreign financing but also that brokered by the national banking system, registered a positive annual growth rate of 3% in May (Graph 47).

### 3. Interest Rate

During the second quarter of the year (in their April 30 session) the Board decided to reduce the benchmark interest rate by 50 bp leaving it at 3.0%. As a result starting in December 2008, the rate had been reduced by a total of 700 bp at that point.

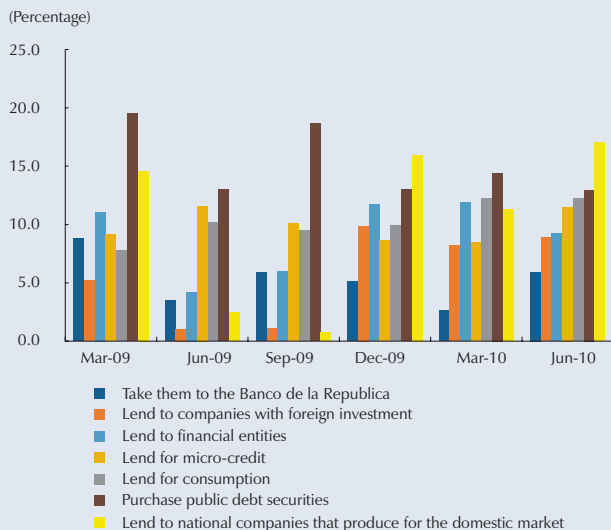
As has been observed over the last year and so far in 2010, the reductions were transmitted rapidly and

## PERCEPTION OF CREDIT CONDITIONS

According to the quarterly survey of the credit situation that was taken by the Banco de la República,<sup>1</sup> loan entities registered an improvement in the environment and the willingness to offer credit in the country during the second quarter of 2010. Specifically, the intermediaries are showing more interest in using their surplus resources for loans to companies that produce for the national market. Likewise, they show more confidence and readiness to deal with hypothetical increases in the demand for loans and think that there is more access to credit for large and medium companies.

Among the main points to be considered at the moment loans are approved, the criterion of profitability with respect to risk has gained importance. In addition, those surveyed do not show any intention of hardening their demands for granting loans (Graph A).<sup>2</sup>

**Graph A**  
Use of Surplus Resources



Source: Banco de la República.

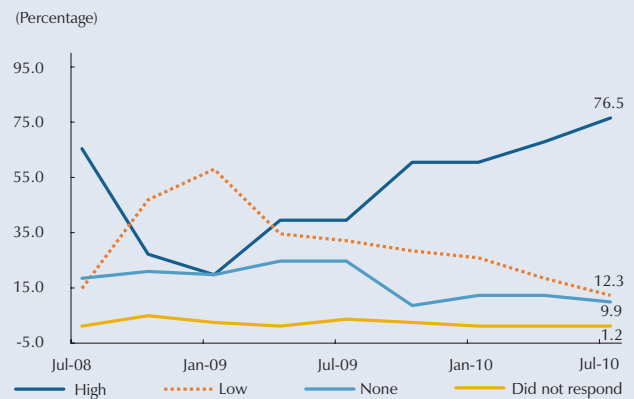
The increase in supply is also recognized by other sectors of the economy as the results of the survey on economic

- 1 Survey of those responsible for the credit policies of banking entities done by the Department of Financial Stability of the Banco de la República.
- 2 The question is, "If your financial entity currently had a surplus of resources on hand, what would they most likely be used for? (Choose five options and number them in order of importance with 1 being the most relevant)."

conditions show.<sup>3</sup> These indicate that a growing percentage of those surveyed believe that there is a high availability of credit (Graph B).

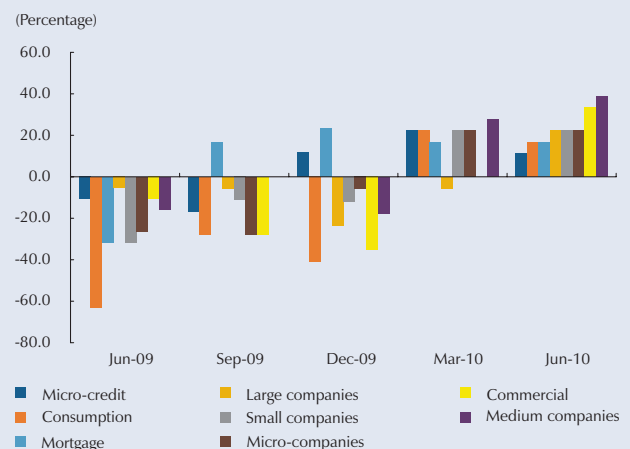
The financial intermediaries who were surveyed also noticed the strengthening of the demand. They have pointed out that the requests for loans has risen for all of the different types of credit and for all sizes of businesses (Graph C). The intermediaries have likewise played down the importance of economic activity as a factor that restricts loan activity.

**Graph B**  
Current Perception of the Availability of Credit



Source: Banco de la República.

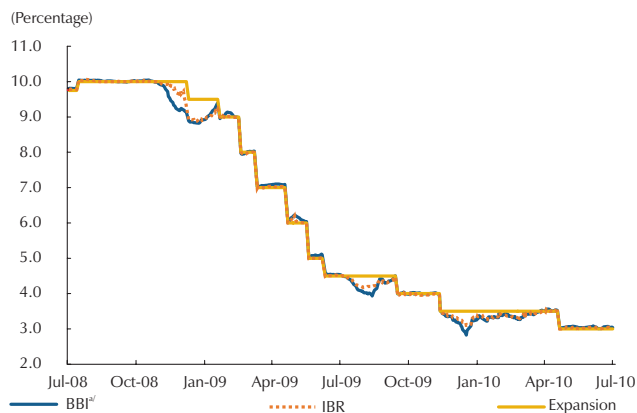
**Graph C**  
Perception of the Demand for Credit



Source: Banco de la República.

- 3 Monthly survey done by the Banco de la República of industry, commerce, the unions and academia.

Graph 48  
Policy rate, BBI and IBR



a/ Bank benchmark indicator.  
Source: Financial Superintendency of Colombia, Banco de la República calculations.

completely to the interbanking market. As of May, the interbanking rate (IBR) and the bank benchmark indicator (BBI) were close to 3.0% (Graph 48). Likewise, a decline in the interest rates on deposits was seen in the deposit market. In June, the monthly average for the 90-day deposit taking (DTF in Spanish) indicator was at 3.5% which is 39 bp lower than that of March and 58 bp than that of December. The total weighted rate of CDs was at 3.9%, 25 bp and 43 bp lower than that at the close of the two previous quarters (Table 7).

With respect to the lending rates, the reduction occurred over a broad range. In the second quarter, the rates for credit cards declined 131 bp, those for consumer loans dropped 111 bp, and those for

Table 7  
Nominal Interest Rates

	December, 2009	March, 2010 (average)	June, 2010	Variation (basis points)	
				II Qtr. 2010	Half year
<b>Interbanking market</b>					
Policy rate	3.50	3.50	3.00	(50)	(50)
IBR	3.29	3.37	3.03	(36)	(27)
BBI <sup>a/</sup>	3.18	3.44	3.04	(41)	(14)
<b>Deposit market</b>					
Total CDs	4.33	4.15	3.90	(25)	(43)
Corporate CDs	4.26	4.06	3.66	(39)	(59)
Office CDs	4.42	4.27	4.16	(12)	(26)
DTF	4.12	3.93	3.54	(39)	(58)
Savings Deposits	2.30	2.22	2.00	(22)	(30)
<b>Credit Market</b>					
<b>Commercial portfolio</b>					
Ordinary loans	10.59	10.51	10.08	(44)	(51)
Preferred loans	7.61	7.18	6.67	(51)	(94)
Treasury loans	7.00	6.55	6.27	(29)	(74)
Loans for housing construction	10.90	10.78	9.98	(80)	(92)
<b>Household portfolio</b>					
Mortgage loans	13.98	13.62	12.95	(67)	(103)
Consumer loans	20.43	19.31	18.20	(111)	(223)
Credit card	25.48	23.84	22.53	(131)	(295)
Usury rate	25.92	24.21	22.97	(125)	(296)

a/ Overnight bank benchmark indicator.  
Source: Financial Superintendency, Banco de la República calculations.

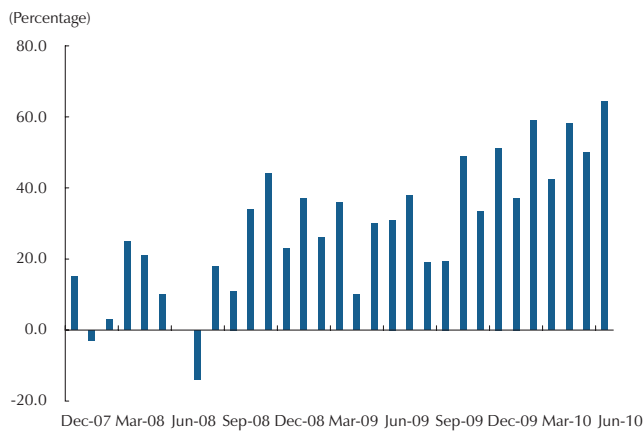
Graph 49  
IGBC



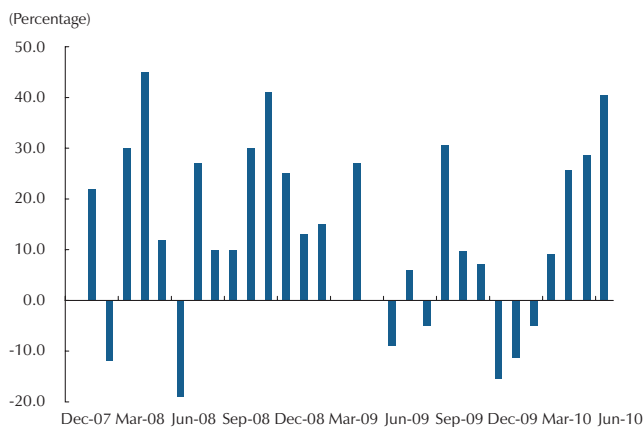
Source: Stock Market of Colombia.

Graph 50

A. Size of the Portfolio



B. Position of the Long Term TES



Sources: Monthly survey of financial opinion (EOF in Spanish), Fedesarrollo and Stock Market of Colombia.

mortgage loans, 67 bp. Regarding the rates for loans to businesses, the most significant decrease was the one for housing construction with 80 bp during the quarter. This was followed by preferred loans with 51 bp.

#### 4. Asset prices

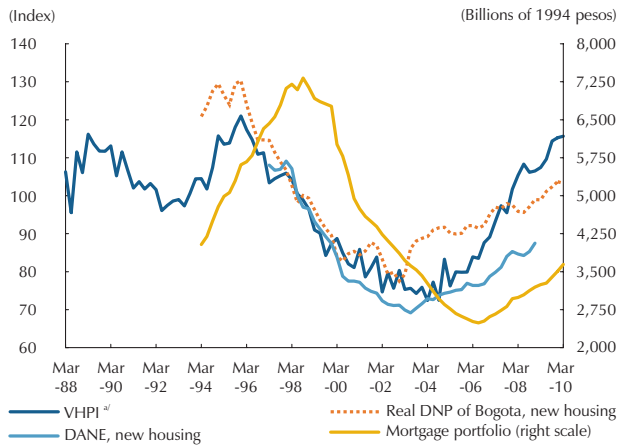
In the last quarter, both the stock market and the public debt market showed significant appreciation. The general index of the Colombian Stock Market (IGBC in Spanish) marked a historical maximum when it reached 13,327 on July 27. This represents a change of 16.5% so far this year and an annualized growth of 30% (Graph 49). Meanwhile, in comparing the monthly averages for June and March, the trading rates for the zero coupon TES dropped 26 bp for the 1-year maturity, 83 bp for the 5-year maturity, 79 bp for the 10-year one and 123 bp for the 15-year one and were at 4.0%, 7.6%, 8.5% and 8.4 respectively.

During this period, both markets had a favorable foreign environment given the positive performance that Latin American economies have had in terms of economic activity, the high levels for commodity prices and stable financial systems.

Domestically, the prices for assets were stimulated by the cutback in the policy interest rate as well as by the publication of the data on inflation and the growth that was better than the market expected. Furthermore, in the case of the stock market, the growing expectations about the country's energy related mining potential were added while in the TES market the help came from the announcement by the government intended to put an end to the uncertainty regarding tax collection and the financing needs. All of the preceding has led to a greater confidence on the part of those responsible for the financial system's portfolios. These are now more optimistic according to what the surveys show<sup>11</sup> (Graph 50, panels A and B).

<sup>11</sup> Monthly survey of financial opinion (EOF in Spanish) Fedesarrollo and Stock Market of Colombia. It surveyed those responsible for managing the financial system's portfolios.

Graph 51  
Indices of Real Housing Prices and the Real Mortgage  
Portfolio



a/ Index of prices for used housing.  
Sources: DNP, DANE and Banco de la República.

Last of all, the indicators for real housing prices continue to show an upward trend. Specifically, the one calculated by the Banco de la República for used housing is at high levels and is similar to the historical maximums seen in 1996. In the case of the index for new housing, which is estimated by the National Planning Department, the rise has been more moderate. That being the case, the real prices for used and new housing are growing at 7.6% and 4.4% respectively (Graph 51).

## Box 2 CAPITAL FLOWS TO THE EMERGING ECONOMIES

\*Daniel Parra

In the last few decades, capital flows have been tightly linked to the performance of the emerging economies and there is abundant material dealing with this topic in the economic literature. For instance, the study done by Calvo, Leiderman and Reinhart (1993) shows how abrupt increases in capital inflows are associated with reductions in the international interest rates and with the economic growth in the developed countries because when these economies slow down, the capital is invested in those emerging markets that could be attractive due to their higher profitability. Furthermore, the study done by Fernandez and Montiel (1996) reveals that the booms in the prices of commodities generate investment flows into the countries that produce them.<sup>1</sup>

In the last five years, some of these relationships that are identified by the literature have been manifest and make it possible to categorize what happened to capital flows into three stages: in the first, between 2005 and 2007, a boom and a surge of capital flows (excluding public debt) into the emerging countries took place. Afterwards, between 2008 and 2009, there were substantial outflows and finally, since the end of 2009 and so far in 2010, the capital has returned although the levels are still far below the figures seen before the financial crisis.

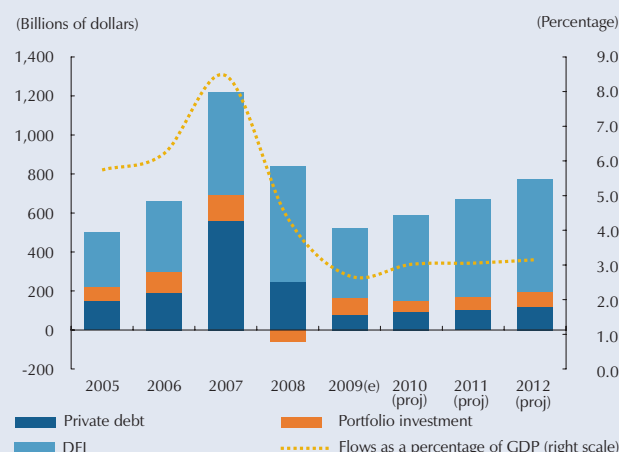
In the first stage, the higher interest rates in the emerging markets, the decline in their risk premiums and the significant hike in the international prices for commodities attracted direct foreign investment (DFI) and allowed the financing of private debt, especially in Asian and Latin American countries. In the second stage, the financial crisis caused a breakdown in both the credit channels and the trade relationships. This brought about serious restrictions on the flows followed by a drop in both the terms of trade and the growth of the emerging economies.

Currently, the resumption of capital flows to the emerging economies corresponds to their better outlook for growth

in comparison to that of the developed countries. It also coincides with an improvement in the risk perception for those economies, higher prices for commodities and the broadening of the differentials in the interest rates.<sup>2</sup> Also, both the financial and growth risks in the developed economies remain more evident, especially in the last three months due to the problems of sovereign debt that affect several countries in the Euro zone, especially Greece (see chapters II and III).

Before 2008 and during the boom period, the increase in capital flows into the emerging economies took place primarily through the issuance of private debt and secondly through DFI. In 2007, in particular, the share was: 46% for private debt, 43% for DFI and 11% for portfolio flows. The hike in inflows to emerging countries boomed between 2006 and 2007 when they doubled and went from US\$659 billion (b) to US\$1.222 b (Graph B2.1). The flows for private debt as well as the ones for portfolio declined the most as a result of the financial crisis.

**Graph B2.1**  
Net capital flows to the emerging economies



(e) estimate  
(proj) projected  
Sources: World Bank, Global Economic Prospects Summer: Fiscal Headwinds Recovery 2010.

Regionally, the increase in capital flows between 2005 and 2007 was based on DFI, especially in the countries of Eastern Asia and the Pacific as well as Latin America. In

\* The author is a professional in the Department of Inflation and Programming. I would like to thank Adolfo Cobo and Daira Garrido for their comments. The opinions expressed are responsibility of the author and do not involve Banco de la Republica and its Board of Directors.

1 Other authors like Frankel (2007) demonstrate that some flows of capital are explained by the situations in which investors take on debt at low rates and invest in markets where the profits are better. This is also known as carry trade.

2 This is due to the fact that the short term rates will be kept close to zero in the developed countries for a prolonged period of time while some changes in the monetary posture have already taken place in some emerging economies.

contrast, the issuance of private debt was the main source for emerging Europe –which includes some countries in Central Asia– although there was a significant increase in Latin America as well. Therefore, the region that was hurt the most by lower inflows in the crisis was emerging Europe which experienced a massive outflow of funds for financing debt. Asia and Latin America have experienced lower reductions in net inflows because of their greater dependency on DFI, which has been more stable (Graph B2.2, panels A, B and C).

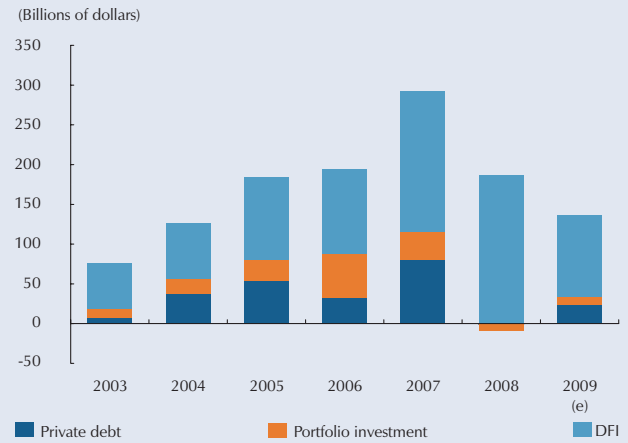
In fact, there was no decrease in DFI in any of the above mentioned regions in 2008.<sup>3</sup> In Latin America, it grew around 14% after having grown 52% in 2007 while something similar took place in other regions. The drop in the DFI occurred in 2009 and it registered reductions of about 43% in each region. In contrast, both the flows for debt financing and those for portfolio investment significantly decreased in 2008 due to the unprecedented surge in the perception of global risk.

This being the case, the differences in the economic performance in these regions are deeply rooted in the structure of their foreign financing. Asia and Latin America were harmed much less by the global recession while in emerging Europe there were considerable reductions in the GDP.

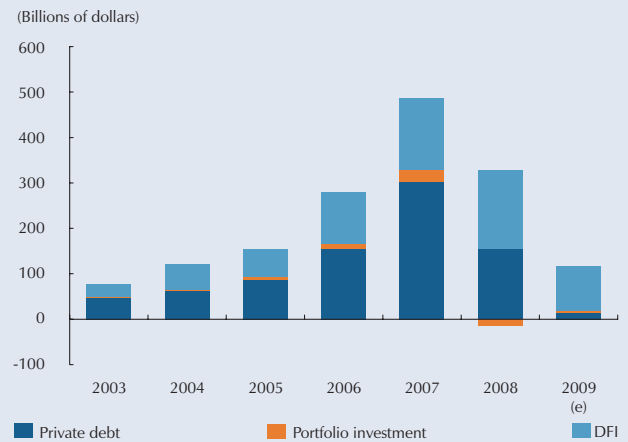
In the future, the outlook for the capital flows points to a strong recovery of these flows to the emerging economies, especially in Asia and Latin America due to the above reasons. The most recent World Bank report predicts a recovery of such flows into the developing economies that will go from US\$454 b in 2009 to US\$771 b in 2012. In spite of this recovery, the levels seen prior to the crisis of 2008 will not be reached (Graph B2.1). According to that report, one of the factors that counteracts the recovery of the capital flows to the emerging economies is the competition for financing funds from the highly indebted developed countries.

Graph B2.2

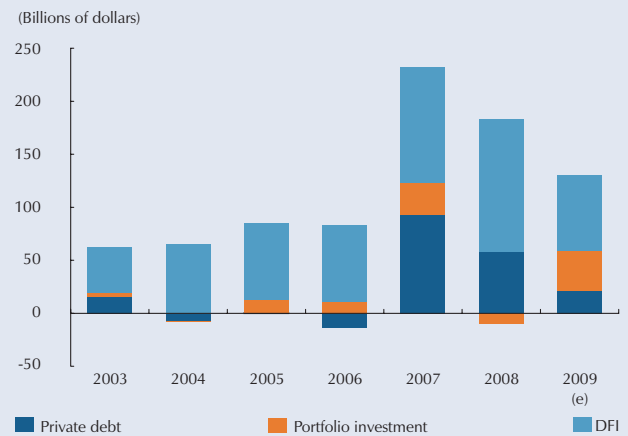
A. Net Capital Flows to Eastern Asia and the Pacific



B. Net Capital Flows to Emerging Europe and Central Asia



C. Net Capital Flows to Latin America



(e) estimate  
Sources: World Bank, Global Economic Prospects Summer: Fiscal Headwinds Recovery 2010.

3 In fact, it took place in 2009 because the financial upheaval broke out in the second half of 2008 and the economic agents had already made a good portion of their investments.

## References

Calvo, G. A.; Leiderman, L.; Reinhart, C. M. (1993). "Capital Inflows and Real Exchange Rate Appreciation in Latin America: The Role of External Factors", *IMF Staff Papers*, vol. 40, núm. 1.

Fernández, E.; Montiel, P. J. (1996). "The Surge in Capital Inflows to Developing Countries: An Analytical Overview", *The World Bank Economic Review*, vol. 10, núm. 1.

Frankel, J. (2007). "Getting Carried Away: How the Carry Trade and Its Potential Unwinding Can Explain

Movements in International Financial Markets" (mimeo), Harvard University.

Reinhart, C. M.; Reinhart, V. R. (2009). "Bonanzas de flujos de capital: una mirada que abarca el pasado y el presente", *Ensayos sobre Política Económica*, vol. 27, núm. 59. Banco de la República.

The World Bank (2010). *Global Economic Prospects Summer: Fiscal Headwinds Recovery*.

### III. THE MACROECONOMIC OUTLOOK

**The economies of the developed** countries slowed down in the second quarter and it is possible that this trend will continue during the second half of 2010.

**However, the outlook for the emerging economies continues** to look favorable and they are expected to lead world growth.

**The forecast for the growth of the Colombian economy was** revised upward for 2010 due to the fact that a major boost from domestic demand is expected. Even so, the higher growth does not imply inflationary demand pressures because the output gap is still negative.

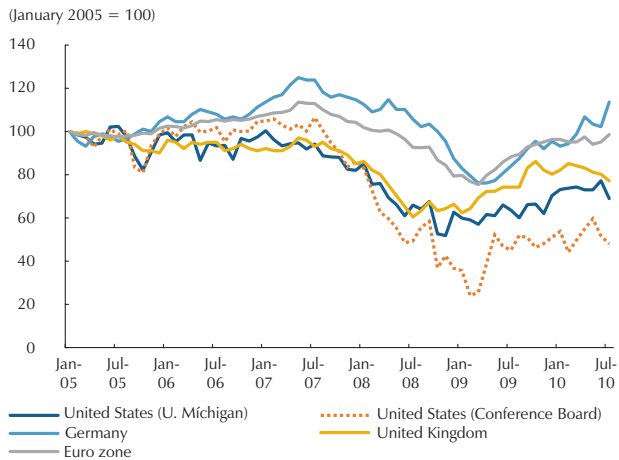
**Compliance with the long term inflation target** for 2010 and 2011 remains highly probable.

#### A. INTERNATIONAL CONTEXT

The worldwide economy expanded again in the second quarter of the year. However, it did so at a slower pace than in the preceding quarters. The emerging economies continued showing more encouraging signs primarily because of the Asian countries and some countries in Latin America. In the developed economies, the situation is less favorable. Here the United States is growing at a moderate rate while the economies of several countries in Europe are still shrinking or demonstrating practically no growth. In general, the credit restrictions, the high levels of indebtedness in the private sector and the deterioration of the labor market continue to be factors that put obstacles in the way of medium and long term growth in developed countries.

In spite of the slowdown registered in the last three months, the outlook for worldwide growth is still relatively favorable. The estimates made by some international entities show that the global economy will expand at a rate of around 4% in the next two years. According to the IMF, the global GDP

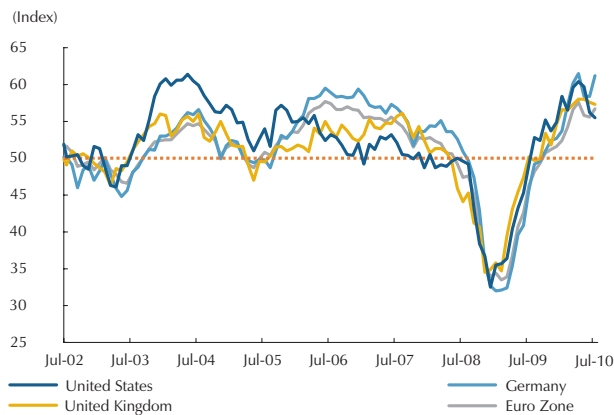
**Graph 52**  
Consumer Confidence Indices in Some Developed Economies



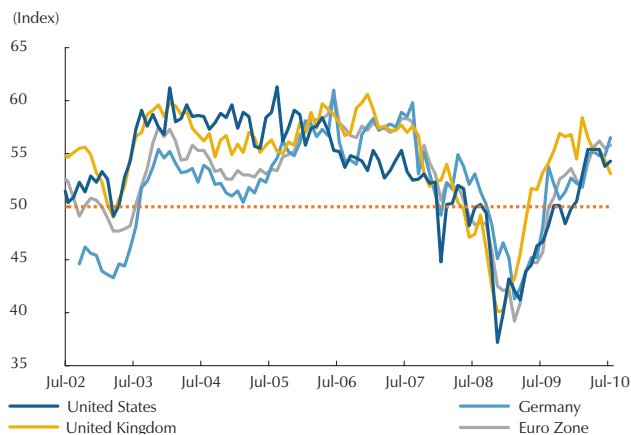
Source: Bloomberg, Banco de la República calculations.

**Graph 53**  
Market Sentiment Indicators

**A. PMI<sup>a/</sup> and ISM<sup>b/</sup> Manufacturing**



**B. PMI<sup>a/</sup> Services and ISM<sup>b/</sup> Non-manufacturing**



a/ Purchasing Managers Index.  
b/ The Institute for Supply Management.  
Source: Bloomberg.

will grow 4.6% in 2010 and 4.3% in 2011, which contrasts with the 0.6% recession in 2009.

The emerging countries are the ones that are leading the economic reactivation in these predictions. The IMF estimates that these economies will grow 6.8% and 6.4% in 2010 and 2011 respectively. This is well above what is estimated for the developed economies according to that entity, which is 2.6% and 2.4% for these two years.

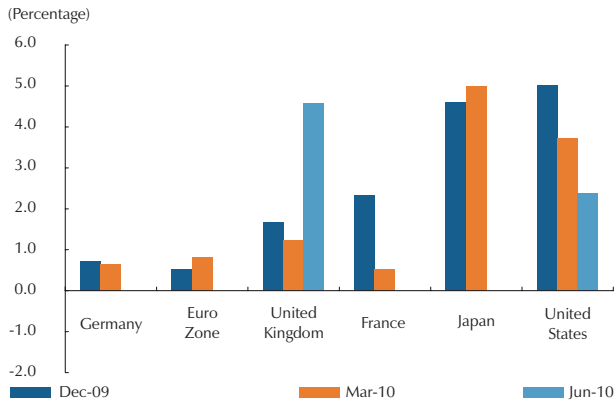
In the last few months, the information available for the developed economies suggests a slowdown in the majority of them. For example, in the performance of retail sales, a vital indicator for evaluating the performance of consumption, Japan and various European countries are at a standstill while in the United States, a slowdown has been seen. In the consumer confidence indicators, a similar trend has been noticed (Graph 52). With respect to that, the case of the United States, where plunges in the household perceptions and expectations have been seen recently, is especially worrying.<sup>12</sup>

In other variables such as industrial production and foreign trade, there were improvements between April and June although the rate of the recovery is slower than what was seen in the previous quarter. This trend is repeated in the market sentiment indicators of developed economies, which suggest a new expansion of manufacturing activity and services in the second quarter although at a slower pace than in the first (Graph 53).

Using preliminary figures for the second quarter, the US economy grew 2.4% annualized quarterly (a/q) after having grown 3.7% a/q in the first three months of the year. The results were significantly below what had been predicted by the market some months previously. During this same period, the economy in the United Kingdom, in turn, grew 4.6% a/q after the 1.2% a/q growth for the first quarter.

12 In July the consumer confidence indicators showed serious plunges: That of the Conference Board dropped to 50.4, the lowest level in 14 months while that of the University of Michigan went from 76 to 67.8.

**Graph 54**  
GDP of Some Developed Economies  
(annualized quarterly variation)

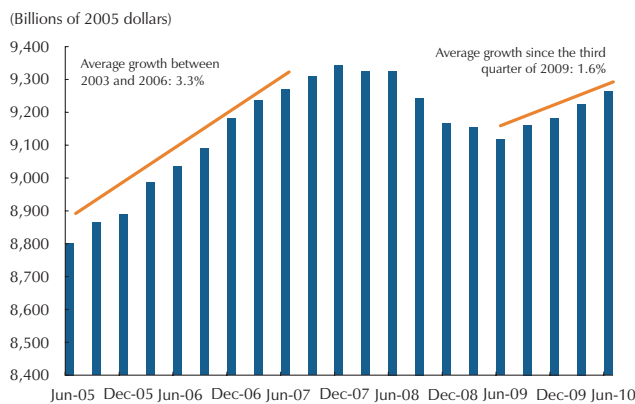


Source: Bloomberg.

For Japan and the euro zone, the data for the second quarter GDP is not available yet. Nevertheless, as was mentioned previously, the information available suggests a slowdown in growth. The analysts' predictions agree with this assessment and anticipate an expansion of 1.6% and 2.4% a/q. In the previous period, the expansion was larger: 5.0% and 0.8% a/q respectively (Graph 54).

In the case of the US GDP, the lower result for the last few months would have been because of the lower contribution from household consumption, the accumulation in inventory and exports together with the greater buoyancy in imports. A better performance was seen in non-residential investment. In the case of consumption, the growth remained very moderate – +1.9% (a/q) and +1.6% (a/q) in the first two quarters of the year. This turns out to be lower than what had been seen prior to the crisis (Graph 55).

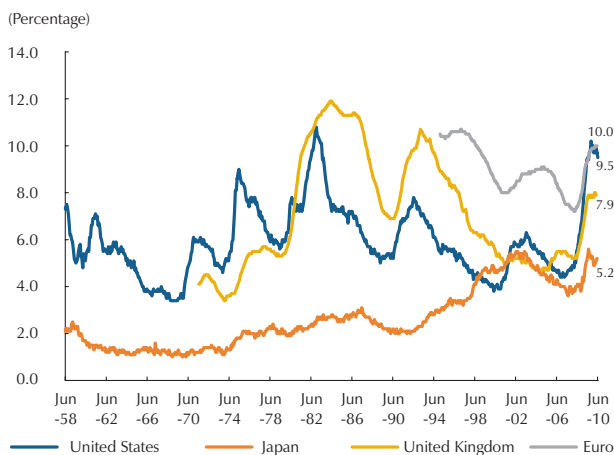
**Graph 55**  
Real Consumption in the United States



Source: Bloomberg.

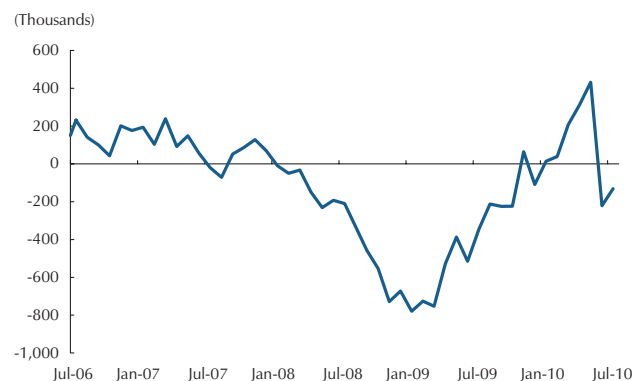
The limited response from the labor market to strength of the economy is an obstacle that continues to impede a full recovery of the US economy as well as that of other developed countries. In many of them, the unemployment rate remains at high levels and no recovery can be seen so far (Graph 56). In the United States, for example, even though the unemployment rate gave way a little (from 9.9% in April to 9.5% in July), the loss of jobs continues. In June, a loss of 221,000 positions was observed while in July, it was 131,000 (Graph 57).

**Graph 56**  
Unemployment Rate in Developed Economies



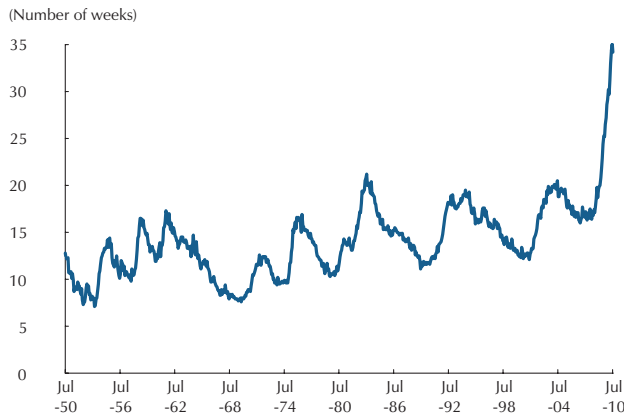
Source: Bloomberg.

**Graph 57**  
Net Employment Creation



Source: Bloomberg.

Graph 58  
Length of Unemployment in the United States



Source: Bloomberg.

If the recovery of production continues without any significant creation of employment, the high levels of unemployment that are seen today will tend to become chronic. This will end up being a hard blow to household and business confidence that could be permanent and reducing the potential growth of the developed economies. The hike registered in the rate of permanent layoffs and in the length of unemployment, which have reached their maximum levels since this information has been available, point in this direction (Graph 58).

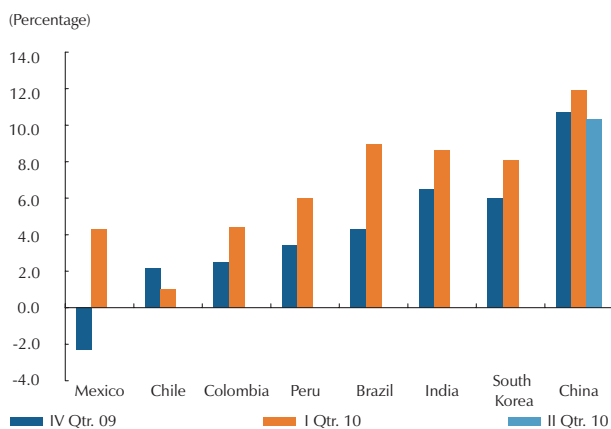
In the future, a slowdown in the growth rate is still anticipated in many of the developed economies due to the numerous risks that they still face.

Specifically, the growing uncertainty about the macroeconomic stability of several countries stands out. These countries face deep fiscal imbalances today and, due to that and to the economic tightening, had to accumulate high levels of public debt in the last two years. In view of the necessary of adjusting their balances, many of these governments have continued to lower their assistance programs to such a degree that there are fears about the strength the private sector will have to recover in the absence of fiscal assistance. Add to this problem the still high household indebtedness, which limits the recovery of expenditure leveraged on credit.

With respect to emerging economies, the vigorous growth of China's GDP stands out. This, even though it slowed down in the second quarter, is growing at an annual rate of 10.3% (it grew at 11.9% the quarter before). Something similar is happening in India, an economy that expanded in the first quarter at an annual rate of 8.6%. For this same period, the economies of Latin America

have also shown a strong recovery with the most outstanding being Brazil, Peru and Colombia with annual growths of 9%, 6% and 4.4% (Graph 59).

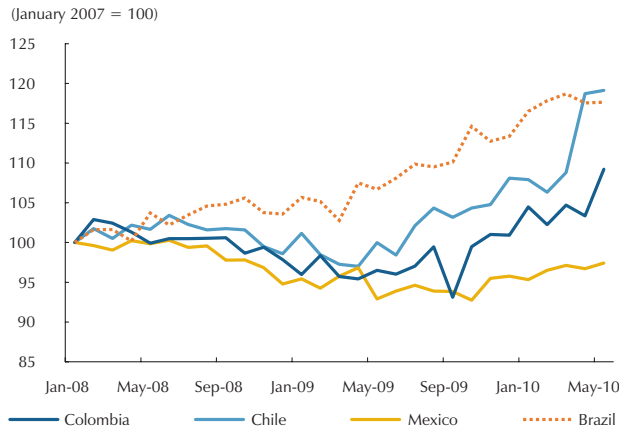
Graph 59  
GDP for Some Emerging Countries in Latin America and Asia (annual variation)



Source: Bloomberg.

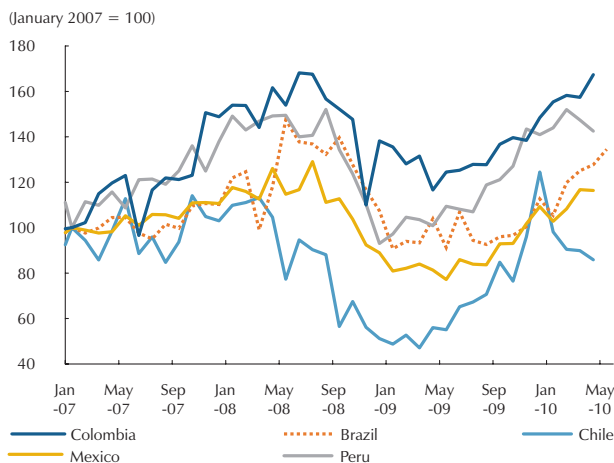
During the second quarter, indicators such as retail sales, industrial production and exports kept on improving in emerging countries. In Latin America, in particular, the retail sales in the majority of the countries (except for Mexico and Venezuela) have reached and even surpassed the pre-crisis levels (Graph 60). Exports from the countries in the region have also recovered significantly thus following the upward trend of global trade (Graph 61). This performance is primarily explained by the strength of the prices for commodities since the majority of the countries are net exporters of these products.

Graph 60  
Retail Sales in Latin America



Source: Statistics institutes of each country.

Graph 61  
Total Nominal Exports in Latin America



Source: Statistics institutes of each country.

Given the previous context, the growth predictions for the United States and Europe for 2010 were kept unaltered for this report with respect to what had been presented in the March report. Specifically, for the United States under the central scenario, a growth of 3.0% is anticipated for this year while the expansion will be 0.8% for the euro zone. No surge is expected for 2011 given the debt problems in Europe as well as the structural difficulties that these economies are facing (Table 8). In the case of the United States, these predictions assume the decreasing effect of the fiscal stimuli and the inventory cycle. It should be pointed out that the projections for developed countries may not be fully capturing the effects of the recent debt crisis in Europe and of the greater uncertainty that it causes.

The forecasts for the emerging countries that are trading partners of Colombia got better except for Venezuela. For Ecuador, the projection moved slightly up and went from 1.5% to 1.7% in 2010 while for 2011, a growth of 2.3% is predicted. In the case of Brazil, the prediction is at 7.1% for this and 4.2% for next year while, for the same periods of time, the forecast for China is 10.5% and 10%. For Venezuela, the growth that is projected for 2010 and 2011 by the Banco de la República will be -1.0% and 0% respectively, which is the same as that in the previous report (Table 8).

With respect to prices for export commodities, these experienced serious plunges because of the financial turbulence in May and June and were below what had

been anticipated in the March report. Nevertheless, in June and the beginning of July, they were on a recovery trend and returning to levels similar to those expected in the predictions at the beginning of the year (Graph 62). This being the case, for what is left of the 2010 and for 2011 no substantial changes in these prices are expected. As a result, the terms of trade for countries that are exporters of raw materials like Colombia will remain favorable.

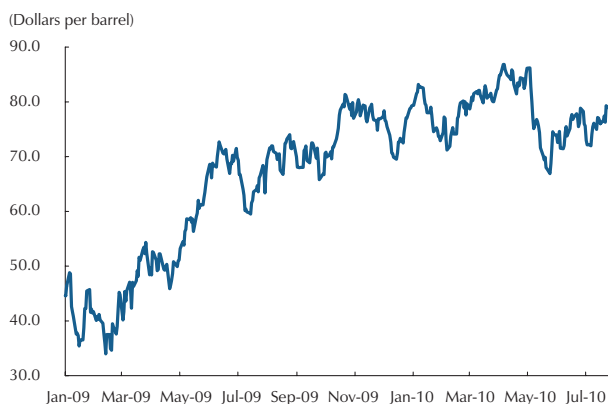
In the central scenario, in particular, an average price for West Texas Intermediate petroleum (WTI) of US\$80/barrel is expected in 2010 with a range of between US\$75 and US\$85. For 2011, a hike in the prices for crude oil is expected with a projected range of between US\$77 and US\$87. These ranges are similar to those that were considered in the previous report and suggest prices that are slightly higher than those seen on average in 2009. A similar performance is expected for the prices of other products that Colombia exports as can be seen in Table 9.

Table 8  
Changes in the Predictions of Real Growth for Our Trading Partners

	2008	2009	Projections	
			2010 <sup>a/</sup>	2011
<b>Main trading partners</b>				
United States	0.0	(2.6)	(2.5 and 3.5)	(2.0 and 3.3)
Euro Zone	0.6	(4.1)	(0.5 and 1.1)	(0.8 and 1.8)
Venezuela	4.8	(3.3)	(-2.0 and 0)	(-1.0 and 1.0)
Ecuador	6.5	0.4	(1.2 and 2.2)	(1.5 and 3.1)
<b>Other trading partners</b>				
Japan	(1.2)	(5.2)	2.4	1.8
China	9.6	9.1	10.5	10.0
Peru	9.8	0.9	6.6	5.7
Mexico	1.5	(6.5)	4.5	4.4
Chile	3.7	(1.5)	4.7	5.8
Argentina	6.8	0.9	6.5	4.0
Brazil	5.1	(0.2)	7.1	4.2
Bolivia	6.1	3.4	3.8	3.7
<b>Developed countries</b>	<b>0.5</b>	<b>(3.2)</b>	<b>2.6</b>	<b>2.4</b>
<b>Developing countries</b>	<b>6.1</b>	<b>2.5</b>	<b>6.8</b>	<b>6.4</b>
<b>Worldwide total</b>	<b>3.0</b>	<b>(0.6)</b>	<b>4.6</b>	<b>4.3</b>

a/ The prediction range is given with an optimistic scenario (ceiling of the range) and a conservative scenario (floor of the range).  
Sources: Datastream, Consensus Forecast, IMF and Banco de la República.

Graph 62  
International Price for WTI Petroleum <sup>a/</sup>



a/ WTI: West Texas Intermediate.  
Source: Bloomberg.

With respect to consumer inflation, both the total and the core inflation remain at low levels in the majority of the industrialized countries (Graph 63). Because of that and due to the weak growth and employment situation, the central banks in these economies are expected to keep their interest rates at levels that are close to zero in 2010 with a few notable exceptions such as those of Canada and Australia (see Chapter II). In Latin America, with the exception of Venezuela, inflation seems to be under control (Graph 64). However, the sharp economic growth has led to adjustments in the monetary policy in several countries (see Chapter II). Something like that is occurring in some Asian economies where inflation has made a significant upswings and the central banks' actions have been timely.

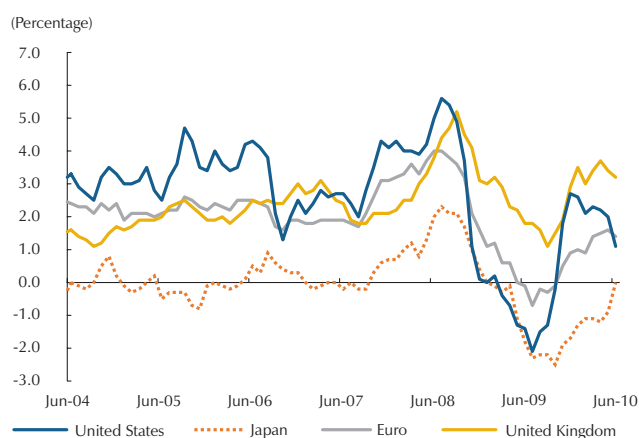
Finally, it is not superfluous to emphasize that the previous predictions for both economic activity and prices face downward risks, which today, are more serious than what had been expected in the previous reports. The tricky debt situation in several European countries, which, up until now, has been

Table 9  
International Prices for Commodities

Product	2008	2009	Projection for 2010		Projection for 2011	
			Scenario A	Scenario B	Scenario A	Scenario B
Coffee (ex dock) (dollars per pound)	1.44	1.65	1.91	2.10	2.01	2.19
WTI petroleum (dollars per barrel)	99.9	62.0	75.0	85.0	77.0	87.1
Colombian petroleum (dollars per barrel)	90.2	56.2	66.1	76.1	68.3	78.4
Coal (dollars per ton)	83.4	80.2	80.1	90.1	82.1	89.7
Nickel-iron (dollars per pound)	3.4	1.9	2.6	2.9	2.4	2.8
Gold (dollars per troy oz.)	873.0	929.0	1,143.0	1,281.0	1,140.0	1,371.0

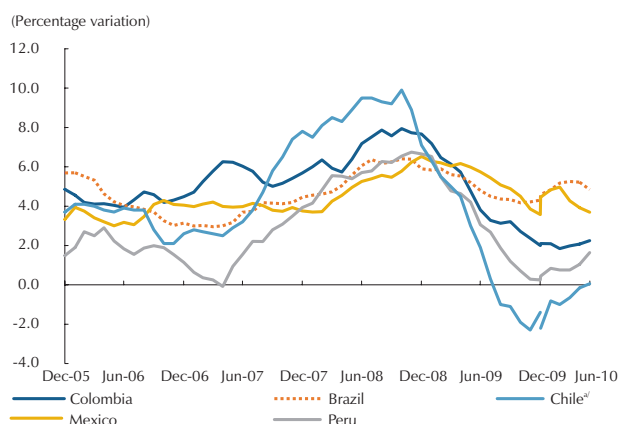
Notes: 1/ Estimated balance of payments in July, 2010.  
2/ Scenarios A and B correspond to the lower and upper range of the projection respectively.  
Source: Banco de la República calculations.

Graph 63  
Total Inflation in Some Developed Economies



Source: Bloomberg.

Graph 64  
Inflation in Latin America



a/ Change in methodology in Chile starting in January in 2010.  
Source: Bloomberg.

weakly reflected in the figures and predictions of growth, could have a greater impact in the future if the fiscal imbalances do not stabilize and confidence is not fully re-established within a reasonable period. Likewise, the weakness that household consumption is still showing in the United States is a worrying factor that demands strict follow up since, in previous years, its strength was what allowed that economy to have high, stable growth.

## B. BALANCE OF PAYMENTS

The projection of the balance of payments for 2010 that is given in this section takes into account the balance seen for the first quarter of the year according to which the deficit in the current account during that period was US\$1.396 m (2.0% of the quarterly GDP). This was above what was seen for the same period in 2009. This rise in the deficit came from some current expenditures (US\$1.804 m) that were higher than the current income (US\$1.423 m). These outlays are due to the upswing in the profits remitted by companies in the country that have foreign investment (35.7% annually) and to the annual 10.5% hike in imports of goods and services. With respect to the income, there was surge in this from the exports of goods and services (17.5%) while the income received through current transfers fell 6.2% mainly due to the reduction in workers' remittances (-17.7% annually). The current deficit for the first quarter was mainly financed by the net inflows of direct foreign investment (DFI) and by private sector foreign debt

and registering a surplus of US\$1.499 m (3.0% of the quarterly GDP) in the financial account.

In addition to the above results, the forecast ranges of domestic, foreign and price growth given in other sections of this report together with other variables were used to project the balance of payments for 2010. Thus, the main assumptions are: i) a growth of the Colombian economy that is between 3.5% and 5.5% (as presented in the next section), ii) recovery of our trading partners (between 2.5% and 3.1%), iii) better international prices for the main export products compared to those seen the year before, iv) a drop in the income from current transfers (between -6.2% and -10.8%) that is less than the one last year,<sup>13</sup> v) a net DFI that is higher than the one seen in 2009 and vi) a net foreign indebtedness of the public sector (excluding Ecopetrol) that is around US\$4.000 m.

The balance of payments exercise shows that in 2010 imports in dollars could grow between 11% and 29% in annual terms and that exports could grow between 13% and 23%. This depends primarily on the trend of the prices for commodities and of the recovery of sales to markets other than Venezuela. As a result, for 2010, an increase in the deficit in the current account in comparison to what had been registered in 2009 and in the first quarter of the year is expected. Indeed, this deficit could range between 2.2% and 3.0% of the GDP. This is expected to be largely financed by inflows of DFI and public sector foreign resources.

For 2011, several balance of payments scenarios were also considered depending on the ranges of prediction established for the international prices of export products and for the growth of the United States, Venezuela and Colombia, etc. Likewise, a significant level of public sector foreign debt (excluding Ecopetrol) but less than that in 2010 is considered for that year as well as a higher net DFI than that projected for this year. The results for the trade balance show that both imports and exports (in dollars) will rise in 2011 at a slower pace than what is expected for 2010. Due to this, the deficit in the current account for 2011 could be between 1.9% and 2.7% of the GDP. It is expected that this will continue to be largely financed by inflows of DFI and public sector foreign resources.

## C. DOMESTIC GROWTH

### 1. Second Quarter of 2010

For the second quarter of 2010, the majority of the economic activity indicators suggested the annual expansion of the economy had continued at a stronger pace than what had been seen in the first quarter of the year. The performance

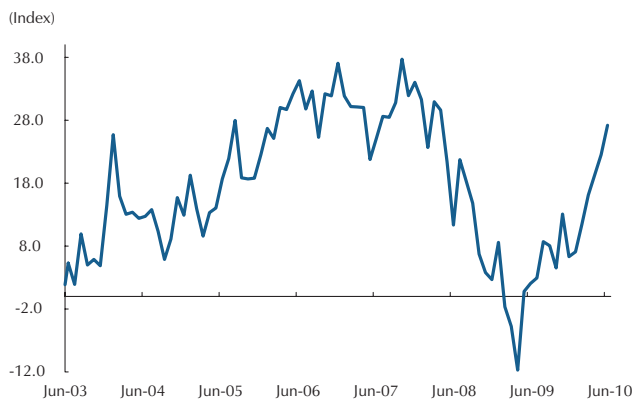
---

13 The main component of current transfers are remittances flows from workers, and their behavior during 2010 will depend on the performance of the economies where these resources come from (United States, Venezuela and Spain)".

has been especially favorable in the case of the indicators of domestic demand, which makes it possible to expect a surge in the growth of this aggregate.

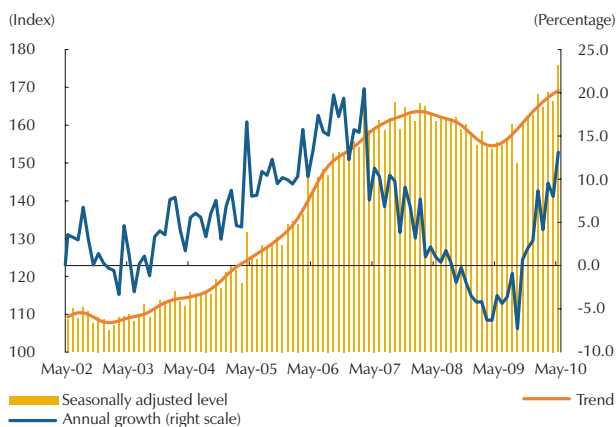
The most positive news comes from consumption. According to the Fedesarrollo survey of consumer opinion, household confidence measured by the consumer confidence index (CCI) went up again between April and June and approached its maximum historical levels (Graph 65). Up to this point in 2010, the CCI has not stopped rising and is driven mainly by a constant improvement in household expectations for the short and medium term but also by a more a positive perception of the current economic conditions. The upswing in consumer confidence has been reflected, in turn, in a greater willingness to purchase durable goods, housing and cars. It is important to note, nevertheless, that with the 2005 base, the correlation between the annual change in household consumption and the CCI is not as high as it used to be.

Graph 65  
Fedesarrollo Consumer Confidence Indicator



Source: Fedesarrollo.

Graph 66  
Retail Trade Excluding Fuel  
(Seasonally adjusted series, trend and annual growth)



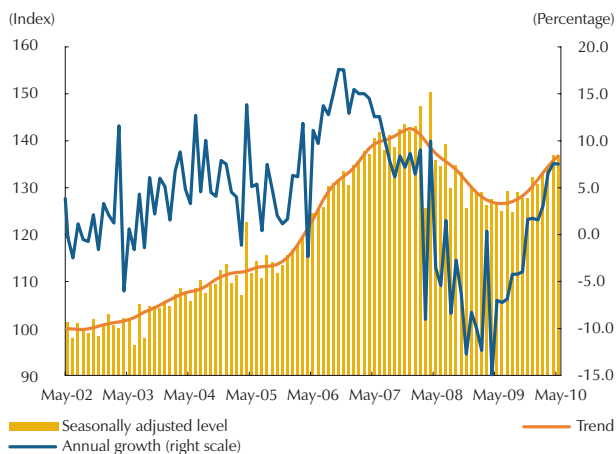
Source: DANE (MMCM).

The favorable performance of consumption in the second quarter, which is suggested by the rise in household confidence, would be confirmed by the developments in retail trade. According to DANE, in April and May, retail sales grew 8% and 13.1% respectively in real terms (Graph 66). Although this performance in May was driven by the purchase of vehicles (which rose at an annual rate of 50.9%), an expansion in annual terms of the purchases of food (4.0%), clothing (8.1%) and especially furniture and appliances (28.7%) was also seen. That being the case, the expansion of retail sales in May without taking cars into account was 7.9%.

On the supply side, the majority of the indicators of economic activity also indicate growth rates that are above those seen in the first quarter. With respect to industry, according to what has been reported by DANE, production grew 7.6% and 7.5% respectively in real terms in the months of April and May. These rates are significantly higher than the average for the first quarter (3.7%). When the seasonal statistical noise is filtered from the series, it can be seen that industrial production is holding to a solid rising trend (Graph 67). The latter shows the role that domestic demand has played in the greater momentum in industrial production and the growth of some foreign markets, other than Venezuela, in the region.

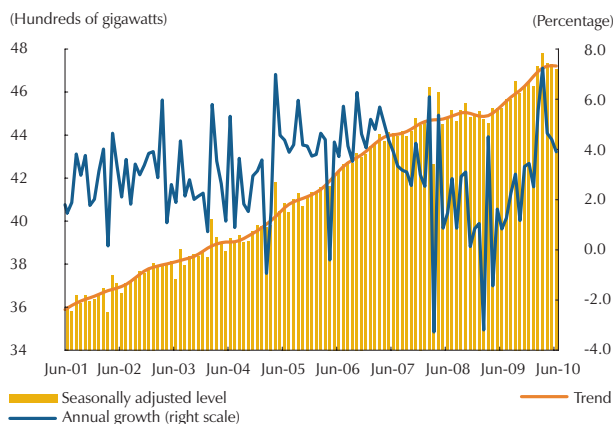
In construction, for April and May on average, the total approved area according to the permits grew

Graph 67  
Index of Industrial Production Excluding Coffee Threshing  
(Seasonally adjusted series, trend and annual growth)



Source: DANE (MMCM).

Graph 68  
Total Demand for Energy <sup>a/</sup>  
(Seasonally adjusted series, trend and annual growth)



a/ Excludes exports of energy.  
Source: XM. Market Expert Company.

at a high annual rate (32%), which is much higher than that for the first quarter (11%). Nevertheless, this surge was largely because of a statistical phenomenon due to a low basis of comparison in the same period in 2009 since its level is still far from the maximums reached in 2007 and 2008 and is still at values that are similar to those of five years ago. The total demand for electricity, a variable that excludes exports of energy and that is found associated, above all, with the strength of urban economic activity, is the only indicator that showed a slowdown between March and June compared to the first three months of the year. The annual growth for this demand was 4.3%, which is lower than what had been seen in the first quarter (5.1%) (Graph 68).

Keeping in mind the previous indicators, in this report it is expected that growth in the second quarter will have been driven primarily by consumption, especially household consumption. Within household expenditures, the strongest segment should be purchases of durable goods, above all cars. Because of this, the estimated expansion rate for private consumption in these last three months should approach what has been observed on average since 2001 (3.8%). Government consumption, in turn, will have a lower annual momentum with respect to what was registered in the first quarter of this year. This slowdown is consistent with a certain stabilization in the levels of public expenditure.

For the investment in fixed capital, a lower annual growth is estimated for the second quarter due to the fact that public works construction should slow down sharply given the larger base of comparison in the same period in 2009. In their levels, however, the public works projects should not change substantially with respect to the first quarter of this year. Investment, other than the above mentioned, will surge and reach rates that are close to those that existed before the recent crisis. For the rest of the investment, an annual growth that is above that of the first quarter and one that is closer to that seen before the slowdown of 2008-2009 is estimated. Both the variation in inventory and the expenditures on machinery and equipment point in that direction. It should be pointed out that the industrial production of machinery surged at a rate of close to 25% in April and May.

The estimates for the second quarter include a positive increase in exports for the first time since the beginning of 2009. However, the pace of expansion

will be moderate. Meanwhile, imports, which will rise more than 10%, will be the expenditure with the greatest strength in line with the expected growth of domestic demand. It is important to stress that the sharp, annual expansion of foreign purchases is also explained to some degree by the low rate of comparison since, as you will remember, in the second quarter of 2009, the level of imports was the lowest for the year.

Last of all, by branches of economic activity, industry and mining are the two sectors that will have contributed the most to the annual growth of the GDP between March and June. In the first case, an annual change of above 8% is estimated while for mining, it is anticipated that the hikes of above 10%, which are driven by oil production, will continue. All of the large branches of activity will have shown positive annual growth.

Based on what was mentioned above, it is estimated in this Report that the annual growth of the GDP for the second quarter of the year will stand within a range between 4.3% and 5.5%. It should be kept in mind that, as a consequence of final adjustments to the new 2005 base, DANE has not published the figures for the GDP with the usual level of breakdown yet. Therefore, this prediction carries with it a range of uncertainty that is higher than usual.

## **2. Outlook for 2010 and 2011**

The strength of economic activity seen in the first quarter of the year together with what is anticipated for the second quarter makes it possible to expect a growth for all of 2010 that is higher than was announced in the previous *Report on Inflation*. In this report, it is still believed that the expansion of the GDP this year will be primarily stimulated by domestic demand in both consumption and investment while sales abroad will make a positive contribution but one that is more modest.

The performance of the Colombian economy for what is left of the year will be strongly influenced by macroeconomic conditions that are remaining stable. Among these the most outstanding are the low rates of inflation and interest. The effects of these benefit both households (for example, by raising their available income) and businesses (e.g. reducing their capital costs). Add to the above a solid financial system that is ready to supply the growing demand for credit and a rising confidence on the part of consumers and investors. On the foreign front, the positive growth of our main trading partners (with the exception of Venezuela), opens up the possibility of a greater demand for Colombian products and the high terms of trade make a significant hike in export income possible.

In this context, the main downward risk would come from future changes in the global economy. The risk of a possible slowdown in the developed economies would be a blow to the recovery of our exports and would negatively affect the

prices of our main export products. Add to this the nervousness in the capital markets with respect to the debt problems in some of the European countries. This could affect the risk perception towards Colombia which could cause adverse effects on foreign financing and deteriorating consumer and investor confidence.

As is usual, three scenarios were kept in mind to calculate the forecast range. The assumptions in these scenarios concerning international matters are consistent with what was shown in the previous section (balance of payments). The assumptions relating to the performance of some domestic variables are given below:

- *Low growth scenario:* public consumption would expand at close to 3.5% while investment in public works projects would show negative growth.
- *Central scenario:* In this scenario, government consumption would rise a little more than 4% and the investment in public works projects would do so at a rate close to 2%.
- *High growth scenario:* public consumption would go up 5% while the investment in public works projects would increase around 6%.

The main results show that consumption would grow significantly in the three scenarios stimulated above all by household expenditures. The rise in this type of outlays would occur at the same time as a little improvement in the quality of employment as well as a moderate decline in the rate of unemployment. At the same time, an increase in private consumption could occur as a consequence of the expansion of credit since the low interest rates and the better outlook for economic growth have reduced the perception of risk on the part of the financial entities. It is worth noting that the strength of household expenditures will continue to be affected by the expected fall in remittances. This, in turn, is due to the poor performance of employment in countries such as the United States and Spain.

Investment in fixed capital should show better growth in all the scenarios than that seen in 2009. Given the moderate rise expected for investment in public works projects, the boost will come mainly from the rest of investment. This latter aggregate, which includes investment intended for industry and construction, will grow significantly in the second half of the year as a result of responding to the expected decline in the surplus of installed capacity and the more intensive use of the pool of existing capital. This aggregate will also respond to the sharp investment that is anticipated for the oil and mining sectors.

The forecasts indicate that imports will recover rapidly in 2010 thus reaching levels close to those that were seen in 2008 and helping to sustain the recovery of domestic expenditures. At the same time, a positive change in exports is

expected but with a much more moderate expansion than that for imports. The sales abroad for this year will continue to feel the negative effects of the trade restrictions imposed by the Venezuelan government as of mid-2009. However, they will begin to experience the results of substituting other markets for that country to a larger degree and, in addition, the impact of commercial treaties with some Central American countries and with Canada going into effect.

That being the case, the growth prediction for 2010 is in a range of 3.5% and 5.5% with the most probable scenario being 4.5% (Graph 69). In this report, the growth forecast was revised considerably upward as a result of various factors. First of all, a stronger upswing in public demand than what had been anticipated in the previous Report is assumed. This is mainly because of the government's higher expenditures and, to a lesser degree, due to the slightly higher public investment in infrastructure. Likewise, the growth projection for private demand was corrected as a consequence of: i) the effect that monetary policy had on the market interest rates for, especially, mortgages and consumption loans. This made it possible to make spending decisions on durable goods and on housing more quickly than predicted, ii) the moderate impact of the Niño phenomenon which made it possible to stabilize inflation and impeded the deterioration that had been projected in available income and iii) the fact that confidence was recovered more rapidly than expected. Furthermore, a better growth for our main trading partners is anticipated and this will be reflected in a greater demand for Colombian exports. Along with this, it is estimated that some supply factors will have a better performance than was initially predicted specifically because of the rapid return of the coffee sector income in the second half of the year. This is the result of the rise in the price for coffee beans and of the higher volumes exported. It is likewise due to the better performance of mining products other than petroleum. Add to all of the above the fact that as a result of the

methodological changes applied to the calculation of the GDP, its growth in the last few quarters has been more accentuated which had an impact on the upward correction of the predictions.

Just as in the case of the prediction for the second quarter, the range of growth projected for all of 2010 contains more uncertainty than usual. This is the result of the absence of information on the level of the branches of activity for the GDP,<sup>14</sup> etc. and due to the lack of certainty about the speed and persistence of global growth.

However, the leading indicator, Imaco, which summarizes several sector variables in one single

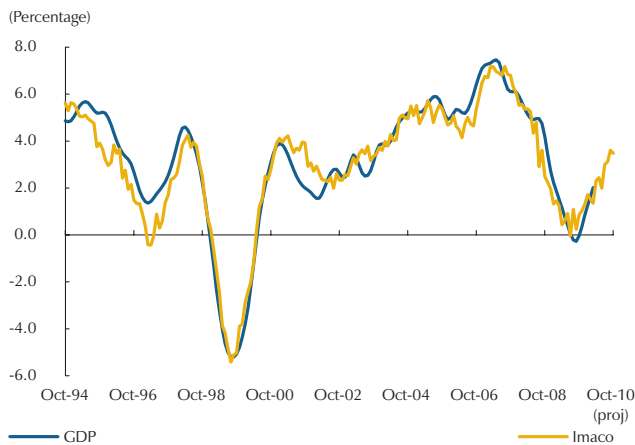
Graph 69  
Forecast Range of the GDP for 2010 and 2011



Source: DANE, Banco de la República predictions.

14 The information on the level of branches of activity will be available as the month of October according to DANE.

Graph 70  
Imaco: Five Month Leader of the GDP <sup>a/</sup>



(proj): projected.  
a/ Four quarters of accumulated growth is presented.  
Source: Banco de la República calculations.

index, shows a growth for all of 2010 which is a little below 4% based on data seen up to May, in other words, in the lower half of the range that the forecast exercise shows (Graph 70). Nevertheless, it would be advisable to be aware that Imaco's methodology (described in the June 2009 Report on Inflation) could leave out some of the specific growth engines for 2010 since it does not directly include things associated with the mining sector.

In addition, a prediction on the growth of the GDP in 2011 is given for the first time in this report. This is also the consequence of different scenarios for the balance of payments. The result of the exercise shows a somewhat lower growth of the Colombian economy than in 2010 due to various factors. On the foreign front, this is because a lower growth

of the global economy is expected and this, along with other variables, will have repercussions on Colombia's exports and income. On the domestic front, this is because a lower growth of public consumption and of investment is expected. The latter is because a decline in the transfer of foreign savings to the productive sector is projected as is indicated in the lower current account deficit projected in the balance of payments.

This being the case, based on these assumptions it is estimated that the growth of the economy in 2011 will be in a range of 3% and 5% (Graph 70). This range is consistent with a significant expansion of household consumption but somewhat lower than what has been seen in 2010.

## D. INFLATION FORECAST

### 1. Forecast

The predictions of inflation for the medium and long terms that are given in this document did not change substantially with respect to those described in the March *Report on Inflation*. The central forecast of the projection for total consumer inflation shows that in 2010 this could end up close to the mid-point of the long term target range established by the Board (from 2% to 4%) and a little below what was predicted three months ago. For 2011, inflation will decline to close to the floor of that range and in the future, it will hit the 3% more rapidly than was thought before.

In spite of the fact that the predictions suffered few adjustments, new circumstances emerged in the last three months that are worth mentioning since they affected the speed of the convergence of inflation with the mid-point of the long term target range.

The most important one has to do with the result of economic growth for Colombia in the first quarter. This was significantly above what had been predicted by the technical team at the Banco de la República. This situation, as was detailed in the preceding section, forced the technical staff to revise the forecast for the GDP and domestic demand upward and made it necessary to recalculate the output gap and suggest that it would close more rapidly. Based on the new estimates, the gap will stay in negative territory for what is left of 2010 but at a level that is closer to zero than what had been thought previously. This rules out the possibility that significant demand pressures on consumer prices, which could jeopardize the goal, will appear in the second half of this year.

For 2011, however, the greater accumulated growth together with the predicted growth for that year will translate into a complete closing of the gap and possibly a hike in the GDP to above its potential level. The gap estimated for the end of 2011, in particular, should go into positive territory at the beginning of that year if the growth trends continue at which time pressures on prices could appear. At any rate, the Bank's model indicates that the probability that this will occur in the first half of 2011 is still low but it will rise in the quarters following that and especially towards 2012.

One circumstance that makes it even less likely that the new growth anticipated for 2010 and 2011 will put upward pressure on domestic prices is the still weak state of foreign demand, especially as a result of the paralysis of trade with Venezuela. The products that could potentially be exported to our neighboring country take in an important segment of Colombian consumer goods, especially food, and their prices are sensitive to Venezuelan demand as the drops registered at the end of last year and the beginning of this one demonstrate. These prices are still being affected by the collapse of sales to that country and the domestic market still seems to be subject to problems of oversupply according to the reports from some sectors. This situation will probably not change substantially for the rest of the year unless the trade is re-established. If this happens, it could affect some prices gradually, an occurrence that is not considered in the predictions presented in this report.

Another factor to consider is the recent trend of the exchange rate. In the last three months, the peso has had a tendency to appreciate and this was not fully anticipated in the previous report. Given that the lag in the transmission of exchange rate movements to consumer prices is at least three months, the strengthening of the peso could continue to have repercussions on the prices of tradables in the second half of the year. That being the case, the current predictions indicate that the prices of tradable goods will continue to put downward pressure on consumer inflation in the next few quarters and will do so more strongly than anticipated three months ago. In 2011 and while no serious downward pressures on the peso are expected, the prices for tradables will keep on showing adjustments that are under the target range. However, they should slowly get closer to this and, in fact, this will occur in 2012.

Alterations in prices that are attributable to transitory supply shocks do not appear in this report unlike what was put forward in the previous reports. In the case of food, the Niño weather pattern has ended based on the most recent reports from the meteorology agencies and its effect on prices ended up being quite a bit lower than were predicted given the reasons explained in the March *Report on Inflation* and the mid-year *Report to Congress*. Currently, the appearance of the Niña phenomenon has been announced and will start in the third quarter. This will increase the rainfall above its normal levels. Although there is the risk that this situation will harm the agricultural supply and create obstacles for transportation thus making goods more expensive for the final consumer, the probability that this will occur is low as suggested by similar episodes in previous years.

Serious shocks with respect to regulated prices other than those that have already been considered in the previous reports are not anticipated either. Those already mentioned will lead to surges that will go beyond the target in the cases of energy (due to the leveling of the fees in the middle of the country) or of fuel (due to the leveling with international prices). In the recent past, an important source of shocks has been international prices, especially petroleum prices. However, for this report, stability of this price is predicted for the rest of the year as well as some increases in 2011 that will go along with the positive global growth though they will be moderate ones (see the first section, pp. 56). A similar performance is expected for other international prices for raw materials and food that is imported or highly tradable such as grain and oil.

Based on the described environment and in view of a better price performance than was expected by the market, inflation expectations declined again in the last three months thus securing themselves within the long term target range not only for the end of 2010 but also for more distant horizons. This helps to guarantee a relatively low inflation for the next few quarters and, especially at the beginning of 2011 when the majority of prices are revised. The indexing mechanisms still in operation point in this same direction, which increases the probability that the price adjustments in 2011 will take place at low rates that are in harmony with the expected inflation for the end of 2010 and within the target range.

Keeping in mind all of the above mentioned circumstances, the Bank's prediction exercise arrived at a central forecast for annual consumer inflation, which rises a little towards the end of the year only to give way after that in 2011 and approach the floor of the long term target range. The surge in annual inflation in the second half of this year is partly concentrated in CPI for food and is more related to a very low basis of comparison in the second half of last year than to significant upswings in prices. In fact, due to the seasonal nature of the supply, food prices tend to rise very little in the second half of the year and may even fall in some months such as September and October. However, last year, these drops were very steep and prolonged as a result of which it is less probable that this will repeat itself. A repetition of this would cause an increase in the annual variations. In the case of regulated prices, a surge in the annual changes between June and December is also

projected for reasons that are similar to those for food rather than to upswings in prices.

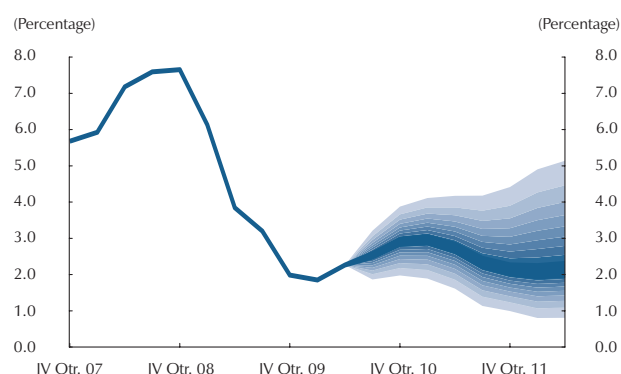
For the other two baskets (CPI of tradables and of non-tradables excluding food and regulated prices) no important changes are projected for what is left of the year. In the case of tradables, the negative annual adjustments will continue to be seen until December and follow a course that is a little below what was considered in the previous report. For non-tradables, the annual variations will remain above the mid-point of the target range.

In 2011, in addition to the reductions in food prices that have already been mentioned, drops in the annual changes for regulated prices and, to a lesser degree, in the non-tradables excluding food and regulated prices are expected. In this latter case, this was due to the role that lower expectations and indexing play, which in an environment of low inflation prevail over upward factors that are associated with higher growth and with the emergence of a positive GDP gap. For tradables excluding food and regulated prices some rally is expected given that the exchange rate will remain stable and that some foreign prices will begin to rise in response to the recovery of worldwide demand. Nevertheless, the adjustment of prices for this basket will remain below the long term target range thus acting as an anchor for total inflation.

## 2. Balance of Risks

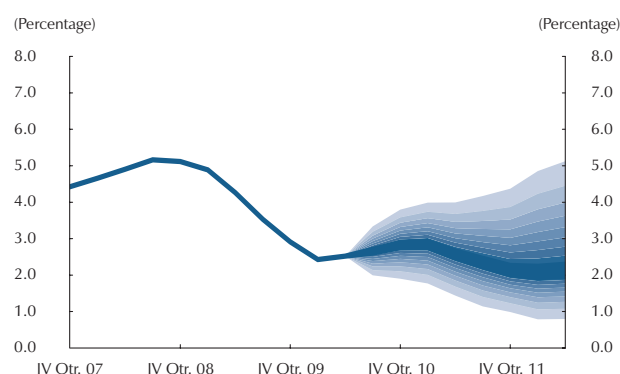
The risk balance for the total consumer inflation and the inflation excluding food prices is given in the *Fan charts* in graphs 71 and 72. The Fan chart was estimated with an uncertainty that is a little less than what was reported in the previous report due to the fact that, these days, the food prices face risks that are a little lower because the Niño weather pattern has been surmounted. In any case, the range of uncertainty remains broad and is larger than has been typical in the past.

Graph 71  
Fan Chart of Total Inflation <sup>a/</sup>



a/ The predictions are built on the assumption of a monetary policy that seeks to guarantee compliance with long term inflation targets.  
Source: Banco de la República calculations.

Graph 72  
Fan chart of inflation excluding food <sup>a/</sup>



a/ The predictions are built on the assumption of a monetary policy that seeks to guarantee compliance with long term inflation targets.  
Source: Banco de la República calculations.

The main downward risks are:

- *A slowdown in the global economy, especially in developed countries.* The central forecast for inflation assumes that the economies of the United States, Europe and Japan will stay on a course for recovery. Nevertheless, in the last few months, signs have emerged that indicate that the expansion could be halted due to the serious structural imbalances that those countries face and to the distrust that this produces in investors and consumers. If a new global slowdown should be verified, the risks for Colombia would be a lower foreign demand and also lower prices for export products with the resulting negative impact on national income. Like what happened in 2008 and 2009, a situation like this gives rise to downward pressure on domestic inflation that surpasses the possible upward effects from a possible depreciation of the peso.
- *A significant appreciation of the peso with respect to the dollar and other currencies.* The improvement in the relative perception of risk regarding Colombia and other emerging countries in the region that international financial markets have could lead to a greater inflow of capital that tends to appreciate the exchange rate (see Box 2 pp. 53). Add to that the possibility of higher income from exports of raw materials due to an increase in the volumes produced in the next few years that is higher than what is assumed in this report. In a situation like that, it would be foreseeable to expect an additional drop in the prices for tradables in 2011, a situation that is not considered in the central forecast in this report.

With respect to upward risks:

- The main one is a domestic growth in the upper part of the prediction range or even above it in a case in which public consumption and investment in public works projects performance better than expected. It is appropriate to point out that the information available on these variables is scarce. Likewise, a possible recovery of trade relations with Venezuela could have repercussions on prices of the main food products and other articles in the consumer basket, especially at the end of 2010 and in 2011.
- A second upward risk has to do with hikes in foreign prices for raw materials and imported food items if supply shocks occur. Something like that happened to the international price for wheat at the time this report was being written. The central forecast does not include significant surges in these prices. Nevertheless, it should be stated that a generalized and permanent rise in the international prices is much more probable if the recovery of the developed economies is consolidated and not blocked as is feared these days.

- Third, the possibility that the Niña weather pattern might have an upward effect on the prices for food cannot be completely ruled out. This was not included in the central forecast.

In this report, just as in the March report, it is still believed that the upward risks continue to prevail over the downward risks. However, the current Fan chart reduces this bias in comparison to the one from three months ago. In any case, the risk analysis indicates that there is a high probability that inflation for 2010 and 2011 will be within the long term target fixed by the Board (between 2% and 4%). For 2010, in particular, the Colombian economy is expected to recover without jeopardizing the goal of low, stable inflation. The projection exercises suggest that a careful follow up should be continued on the following elements for 2011: i) the speed at which the output gap closes, ii) the persistence of low inflation which could be transmitted to some indexed goods and services, iii) inflation expectations, and iv) the outlook on the future performance of the dollar. As always, the predictions given take an active monetary policy into consideration.

### Box 3

## PERFORMANCE OF AND OUTLOOK FOR THE GLOBAL MACROECONOMIC IMBALANCES

\*Daniel Parra  
Silvana Mantilla

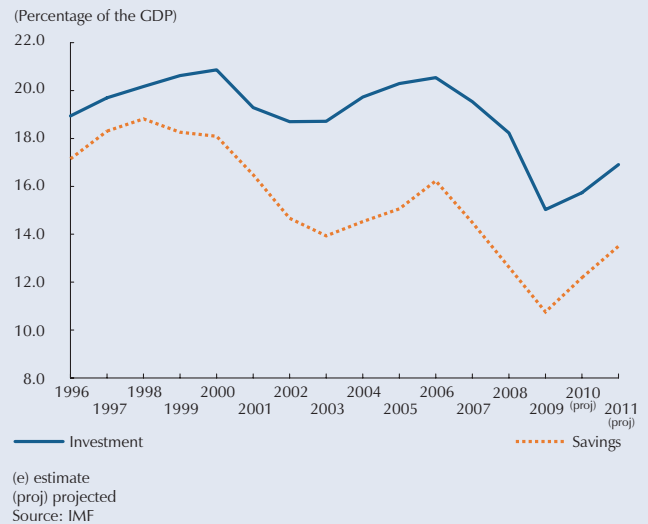
At the beginning of the 2008 financial crisis, a strong debate about its origins took place in academic circles. Some authors like Portes (2009) argued that the crisis was the result of global imbalances caused by the differences in the decisions between the countries regarding savings and investments, which were externally reflected in the current accounts and the capital flows. Others like Taylor (2009) and De Gregorio (2008) postulated that an excessive flexibility in the monetary policy and the lack of regulation were the main causes. In contrast, Caballero (2008 and 2009) states that the crisis was caused by a lack of negotiable and safe financial assets, which was much more noticeable in the emerging countries that rushed to buy American assets, traditionally considered more reliable due to the strength of their financial market. As a consequence, capital flowed from countries with excess of savings to developed countries that lacked them. In spite of the absence of a consensus regarding the main cause of the recent crisis, most of the authors think that the macroeconomic imbalances had a multiplying effect that was independent of the mechanisms that unleashed them.

Blanchard and Milesi-Ferretti (2009) analyzed the changes in the global imbalances and classified what happened into three periods. In the first phase, between 1996 and 2000, the technological boom, the search for higher profitability and the expectations of better productivity in the United States made an investment upswing in that country possible. This generated an increase in its current account deficit. Simultaneously, a reduction of investments in Asia took place after the Asiatic and Japanese crises which led that region to record a surplus in current account (Graphs B3.1 and B3.2).

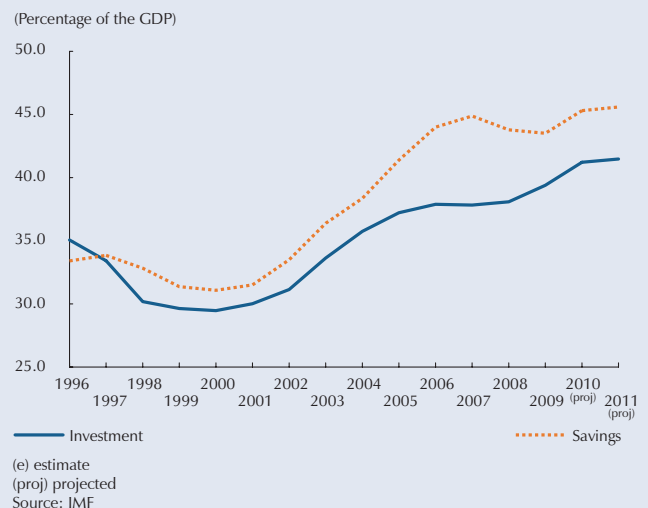
In the second phase, between 2001 and 2004, the United States again registered a deficit in current account as a result of a decline in savings, particularly in the public sector. At the same time, emerging Asia and Japan continued to have surpluses which were added to those of the oil exporting countries. In general, the macroeconomic imbalances did not show important changes in this phase.

\* The authors are, in the order given above, a professional and a student assistant in the Department of Inflation and Programming. The opinions expressed are responsibility of the authors and do not involve either Banco de la Republica or the Board of Directors.

Graph B3.1  
United States



Graph B3.2  
Emerging Asia



In the third phase, which goes from 2005 up to the moment when the 2008 financial crisis began, the United States continued to have a low level of savings and a high current account deficit. This situation was accentuated because it coincided with a period of significant increases in the prices for financial as well as real estate assets in the developed world and also of a noticeable rise in the capital flows that were designated for financing both public and private debt in those countries.

According to most authors, the imbalances in the United States were harmful before the crisis because they reflected the overly optimistic expectations that consumers and

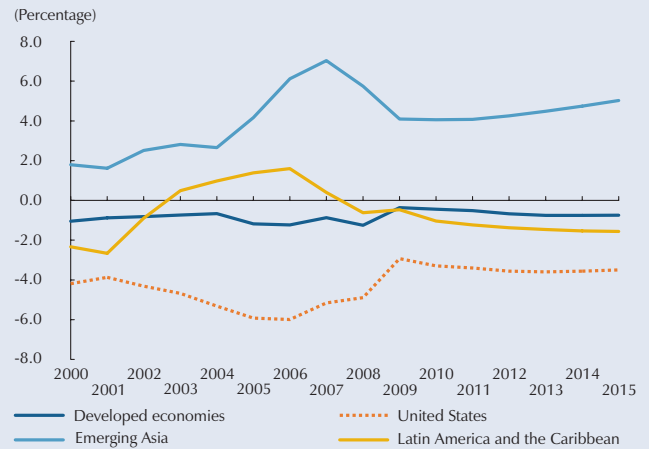
investors had and which were made evident in the real estate boom. Therefore, at the beginning of the crisis, households and companies found themselves with high levels of indebtedness as well as also asset prices that were overvalued and which soon plunged and produced a general loss of wealth.

After the onset of the international financial crisis in 2008 and up to today, the emerging economies, especially those in Asia, reduced their levels of savings because they had to stimulate the economic growth through their domestic demand in response to the drop in global demand (Graph B3.1). At the same time, in the United States and other developed countries there were sharp downturns in private consumption and investment due to the general loss of wealth, which was aggravated by an unprecedented collapse in the job market (Graph B3.2). Likewise, there was a significant plunge in the price of commodities that caused a fall in the surplus of the oil exporting countries and a reduction in the deficit of the importing countries, as was the case in the United States. Likewise, there was an adjustment in the current accounts of many countries as a consequence of the contraction in the global trade. All these events brought about a sizable reduction in the global imbalances and allowed some adjustments in the current accounts.

Nonetheless, it would seem that this process was not completed and was limited to the recession phase only of the economic cycle. With the budding signs of recovery in the developed countries, the factors that allowed those adjustments will be reversing their tendency (see Chapter 3). In the first half of 2010, in particular, there was another expansion of the trade deficit for the United States and the prices of commodities rose above the levels seen in 2009. The latter has again been beneficial for the oil exporting countries since it lets them maintain or raise their external and fiscal surpluses. By recognizing these new tendencies, the IMF projects a slight growth in the deficits of the United States and the developed countries from 2010 up to 2014 (Graph B3.3).

When an adjustment is considered inevitable, interrupting it produces new uncertainty with respect to how the adjustment will be carried out and how traumatic it will end up being. Some literature suggests a first scenario in which the adjustment takes place abruptly when the lower demand for American and European financial assets generates a sudden cut in the capital flows to those economies. This will lead to an increase in the interest rates and to a sharp undermining of the currencies of those countries and, as a result, their household consumption will be severely affected. In that scenario, it will not be possible to offset the fall in the domestic demand in the economies with deficits by increases in

Graph B3.3  
Current account as a percentage of the GDP



(e) estimate  
(proj) projected  
Source: IMF

expenditures in the emerging countries with surpluses. This would seriously harm global growth.

A second option considers a gradual closure of the imbalances by means of a smooth adjustment in both the consumption and prices of financial assets. In this situation, the lower demand in the countries with deficits would be replaced by a higher demand in the countries with surpluses and, as a result, the global growth would be less affected. Making the exchange rates in the Asiatic economies more flexible, especially China's, would make the adjustment even more gradual.

Despite these divergent opinions, a consensus has begun to emerge from both academia and the market with respect to the lessons in monetary policy that the recent crisis has given us. First, it is clear that in the future, the economic authorities will have to maintain a schedule for keeping a tight watch on the chronic macroeconomic imbalances on a global scale and try to minimize the adverse effects that could be unleashed by the adjustment processes as much as possible. Corbo (2006) suggests that the policies should be directed towards increasing both the private and public savings in the United States while, at the same time, consumption will have to be stimulated in China by making access to credit easier for families as well as by expanding social security. The purpose of the latter would be to reduce savings as a precautionary measure.

Secondly, it is clear that the countries should allow their currencies to float without intervening excessively while at the same time they should have counter-cyclical monetary and fiscal policies that do not disrupt the

macroeconomic stability. Third, the authorities must try to keep their financial systems strong by means of regulations and following up on these entities. All these measures would make it possible to attenuate the effects of external shocks.

## References

- Blanchard, O; Milesi-Ferretti, G. M. (2009). "Global Imbalances: In Midstream?". FMI, Staff Position Note SPN/09/29.
- Caballero, R. J.; Farhi E.; Gourinchas, P. O. (2008). "Financial Crash, Commodity Prices and Global Imbalances". *NBER*, Documento de Trabajo.
- Caballero, R. J. (2009). "The Other Imbalance and the Financial Crisis", preparado para la Conferencia
- Paolo Baffi, pronunciada en la Banca d'Italia el 10 de diciembre de 2009.
- Corbo, V. (2006). "Los desbalances globales y los riesgos en la economía mundial", Banco Central de Chile.
- De Gregorio, J. (2008). "Las tensiones de la economía mundial. Documentos de política económica". Banco Central de Chile.
- Portes, R. (2009). "Global Imbalances". Documento interno London Business School y CEPR.
- Taylor, J. (2009). "The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong", NBER Working Paper No. w14631.

# ANNEX

## MACROECONOMIC PROJECTIONS OF LOCAL AND FOREIGN ANALYSTS

A summary of the most recent projections made by local and foreign analysts on the main variables in the economy for 2010 and 2011 is given in this Appendix. At the time they were consulted, the analysts had information up to July 2010.

### Projections for 2010

On average, the local analysts expect an economic growth of 4.4% compared to the 3.0% given in the previous Report on Inflation. Meanwhile, foreign entities who were consulted anticipated an average growth of the GDP of 4.0%.

Table A1  
Projections for 2010

	Growth of the real GDP (Percentage)	CPI inflation	Nominal exchange rate at the end of	Nominal DTF (Percentage)	Fiscal deficit (percentage of the GDP)	Unemployment in 13 cities (percentage)
Local analysts						
Alianza Valores	5.0	3.0	1,800	3.5	(3.4)	11.5
ANIF <sup>b/</sup>	4.3	3.5	n.a.	3.3	(3.6)	12.1
Banco de Bogotá	4.5	3.2	1,900	3.3	(3.4)	11.5
Banco Santander	4.0	3.1	1,900	3.8	(3.2)	11.5
Bancolombia	4.3	3.4	1,900	3.3	(3.6)	12.9
BBVA Colombia <sup>a/</sup>	4.2	3.2	1,920	3.5	(3.9)	11.9
Corficolombiana <sup>a/</sup>	4.3	3.2	1,950	3.6	(4.1)	11.9
Corredores Asociados <sup>a/</sup>	4.5	2.8	1,850	3.7	(3.0)	12.0
Correval	4.7	3.3	1,840	3.6	(3.4)	12.1
Davivienda <sup>a/</sup>	4.7	3.0	1,973	3.9	(4.0)	12.9
Fedesarrollo	4.0	3.2	1,890	n.a.	(4.5)	12.4
Average	4.4	3.2	1,892	3.5	(3.6)	12.1
Foreign analysts						
Citi <sup>a/ b/</sup>	4.0	3.3	1,900	4.1	(3.7)	12.6
Deutsche Bank	2.7	3.0	2,100	n.a.	n.a.	n.a.
Goldman Sachs	4.7	3.6	2,050	n.a.	(3.5)	n.a.
JP Morgan	4.5	3.3	1,950	n.a.	(3.7)	n.a.
Average	4.0	3.3	2,000	4.1	(3.6)	12.6

n.a. Not available.

a/ The deficit projection corresponds to NG.

b/ Average unemployment rate for the year.

Source: Banco de la República (electronic survey).

Table A2  
Projections for 2011

	Real growth of the GDP (porcentaje)	CPI inflation	Nominal exchange rate at the end of
Local analysts			
Alianza Valores	5.5	2.5	1,700
ANIF	5.0	4.0	n.d.
Banco de Bogotá	4.1	4.0	2,000
Banco Santander	4.7	3.6	1,900
Bancolombia	4.0	3.8	1,985
BBVA Colombia	5.0	3.2	1,900
Corficolombiana	5.0	3.5	1,955
Corredores Asociados	5.0	3.4	1,800
Correval	5.5	3.5	1,870
Davivienda	5.2	2.9	n.a.
Fedesarrollo	4.6	3.4	n.a.
Average	4.9	3.4	1,889
Foreign analysts			
Citi	4.4	3.6	1,950
Deutsche Bank	3.0	3.0	2,200
Goldman Sachs	4.6	3.5	2,011
JP Morgan	4.1	3.9	2,150
Average	4.0	3.5	2,078

n.a. Not available.

Source: Banco de la República (electronic survey).

With respect to the inflation projections, local analysts anticipate an increase of 3.2% in prices when the year ends while the foreign ones expect 3.3% on average. These values are within the target range fixed by the Board of Directors JDBR for 2010 (between 2.0% and 4.0%) and have been showing a substantial decline over the course of the year.

With respect to the exchange rate, the national analysts expect that the TRM will end the year at an average value COP\$1,892 compared to the estimated COP\$1,960 in the survey that was analyzed in the previous report. The foreign analysts projected a TRM at around COP\$2,000 for the close of the year.

Local analysts project values of 3.5% for the DTF. In addition, the national analysts, who were consulted, expect the unemployment rate to be at 12.1%.

### Projections for 2011

National analysts anticipate a growth of 4.9% for 2011 compared to the 4.0% estimated by foreign analysts. With respect to inflation, local and foreign analysts project an inflation of 3.4% and 3.5% respectively. Regarding the exchange rate, the national and foreign entities expect average values of COP\$1,889 and COP \$2,078 respectively for the exchange rate.

Coordination, editing and layout for this report were done by the Publication Section of the Institutional Communication Department in Times New Roman 11. Printing was coordinated by the Banco de la República Documentation and Editorial Department.

Translated by Cecile Dunn

June, 2011