

# INFLATION

SEPTEMBER 2004

BANCO DE LA REPÚBLICA

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# INFLATION IN SEPTEMBER AND THE OUTLOOK

- Non-food inflation and other basic indicators of inflation have fallen in recent months and averaged 5.4% at September. However, the past month saw a rise in food inflation from 6.6% to 7.2%, partially because of the transportation strike. This kept total inflation at 6.0%.
- Although influenced by temporary factors such as less inflation in certain controlled prices, the downturn in non-food inflation was basically a question of the trend in prices for tradable goods. Tradables inflation offset the rise in non-tradable inflation, which went to 4.9% in June and 5.4% in September. This trend in tradables inflation is now almost a year old and is associated with appreciation of the Colombian peso. However, the last quarter witnessed a far more moderate reduction in tradable inflation than in previous quarters, despite increased appreciation in the exchange rate. This might have been due to inflationary inertia and expectations of how tradables inflation would perform.
- The steady increase in non-tradables inflation over the past year suggests that the output gap continues to close and demand is having an increasingly significant impact on inflation. Expectations and costs also affect inflation. The quarter saw no major changes in inflationary expectations. As to costs, there are signs of pressure in certain sectors that produce raw materials such as steel and some building materials. The rise in fuel prices also had a certain impact. However, these pressures have been neutralized by appreciation and, consequently, there was no generalized increase in overall costs during the last quarter, or during the course of the year.
- External and internal conditions favorable to growth of the Colombian economy continued throughout the third quarter. External demand and private investment were the primary sources of economic growth.
- The world economy has continued to recover, despite higher fuel prices and the gradual rise in interest rates set by the United States Federal

Reserve (the Fed.). However, this adjustment has yet to become a major constraint on international liquidity and has not affected capital flows to emerging economies, which continue to grow. The drop in spreads, following increases in the second quarter, mirrored the added influx of capital. Prices for major export commodities stayed relatively high, and oil prices have gone well beyond the forecasts established three months ago.

- In this context, the Colombian economy reflected two tendencies throughout the year. The first is healthy growth in exports and gross domestic product (GDP) in tradable sectors. The second is exchange appreciation.
- Favorable conditions in the external sector bolstered export growth, thanks to high international prices (in some cases above predictions, as with oil) and solid growth worldwide (the recovery of the Venezuelan economy has been particularly important). These factors were mirrored in good performance by traditional and non-traditional exports, particularly those to the United States and Venezuela. Non-traditional exports to other countries saw increases in the 10%-to-15% range (accumulated over 12 months). Good GDP performance in tradable goods sectors, with a 4.4% rise during the first half of the year, reflects the momentum in exports.
- Peso appreciation in recent months was associated with several factors; namely, good export performance, a larger net flow of external capital (via foreign direct investments (FDI), especially in oil, and shifts in assets) and more confidence on the part of foreign and domestic investors as a result of better security and positive economic results in recent quarters. Exchange appreciation was more pronounced in July and August, prior to a partial reversal in late September and early October, which was due to measures taken by the Board of Directors of Banco de la República (BDBR). Average annual appreciation during the course of the year was 6.6% by the end of September. The trend towards appreciation was evident in other countries of the region as well. In this sense, appreciation of the Colombian peso is not an isolated phenomenon and should be understood in the context of world growth, high international prices for commodities, and a generalized weakening of the dollar against most currencies, including those of Latin America.
- Conditions at the internal level continued to favor growth in domestic demand. The recovery in private disposable income, thanks to job conditions, was a factor. In August, unemployment in the 13 major cities was 15.3%, having been 17.3% during the same month in 2003. Unemployment nationwide dropped from 14.4% to 13.4%. A better job

situation contributed to growth in "formal" employment, or occupation not reported as under-employment, and an absolute reduction in the latter.

- A reduction in the global participation rate (GPR) contributed to the drop in unemployment over the last two quarters. This could mean the rise in employment and job conditions is beginning to be reflected in better and more stable levels of family income. The increase in the number of self-declared unemployed who enrolled in the educational system in recent months is one indicator that might confirm this interpretation. These factors continued to permit GDP growth in the non-tradable goods sectors, which increase by 4.1% during the first six months of the year.
- The outlook for the global economy over the short and medium-term continues to be favorable, despite the rise in oil prices and external interest rates. Expectations of economic growth worldwide are the highest they have been in several years, although growth forecasts for the United States have been adjusted downward slightly. The outlook for 2005 is less optimistic, although the slowdown in growth is expected to be moderate.
- In Latin America, economic conditions are now the best they have been since before the last crisis, which was in the late nineties. The weighted growth of Colombia's trading partners is expected to decline from 4.3% to 3.3% in 2005. Accordingly, for 2005, several analysts expect to see no major changes in the influx of capital into emerging markets, compared with the levels observed in 2003 and 2004. These forecasts are reinforced by expectations of a weak dollar against most currencies, due to the fiscal and external imbalances in the U.S. economy. This being the case, mid-term commodity prices could stay relatively high, which would spell good terms of trade for emerging countries in the subregion, Colombia included.
- The trend in oil prices is one of the paramount risks associated with the external situation described in this report, as are larger than expected increases in external rates. However, a number of analysts believe the emerging countries are probably now less vulnerable to a rise in internal interest rates than in earlier economic situations, thanks to a better macroeconomic base.
- As for the remainder of the year and early 2005, several factors will continue to favor growth. These include business and consumer expectations, low interest rates and broad liquidity in the economy, more willingness on the part of business and consumers to rely on credit, the rise in business profits during 2004, and a general recovery in private disposable income. Consequently, the pace of economic growth is

expected to be similar to what it was in the last four quarters. External and domestic analysts expect to see 4.0% growth, on average, for 2005. Consumption and private investment will be the most dynamic components of demand next year. Exports could make less of a contribution, due to the slowdown in non-traditional exports and less economic growth for the country's trading partners, as well as the impact real appreciation could have on the peso.

- Inflation in the coming quarters will continue to be associated with two opposite forces: a) accumulated exchange appreciation and its effect on tradables inflation, and b) gradual closure of the output gap and the impact this has on non-tradables inflation. Tradables inflation is expected to stay below total inflation and target inflation, which would help to lower core inflation rates. How much this contributes would depend on inflationary expectations with respect to future targets and on the inertia of inflation itself.
- Non-tradables inflation should continue rise as the output gap narrows, provided there is no major change in inflationary expectations, as has been the case in recent months. These expectations could help to lower inflation in 2005, more so than in other years, since the inflation target for 2004 likely will be met and in view of the trend towards exchange appreciation.
- In short, whether or not future targets are met will depend on the extent to which tradables inflation continues to decline and point where non-tradables inflation stabilizes. Shocks caused by fuel and public utilities will continue to pose considerable risk in the year ahead, and El Niño is likely to be a factor in late 2005. This could exert important inflationary pressure on overall inflation for 2005, but would only be temporary.
- According to inflation forecasts, total consumer price inflation will be near the middle of the target range for 2004. There were two fundamental changes in the basic scenario of the transmission mechanism model (TMM): 1) the exchange rate path was reduced for 2004 and 2005, and 2) the short-term forecast for inflation was also revised downward. The basic scenario does not include eventual shocks caused by VAT, or the impact El Niño could have on food inflation in 2005, which is an important factor to consider. In the basic scenario, the model points to less of a rise in interest rates during the remainder of 2004 and in 2005, compared with the situation described in the June report, although interest rates will increase in the medium and long-term to come together at their long-term level.
- Two alternative scenarios were considered. The first assumes a narrower gap in 2004; the second, greater exchange appreciation in 2005. A

#### **ABSTRACT**

narrower output gap would imply a substantial rise in interest rate requirements as of the fourth quarter of 2004, compared with the basic scenario. On the other hand, depending on the extent of appreciation in 2005, rates would not have to increase this year and would do so to a lesser degree the year after.

- In this context, monetary policy should focus on narrowing the existing output gap at a pace that would prompt no sudden changes in the prices of tradable goods. For example, the likelihood of a positive gap in a situation characterized by real appreciation should be minimized, as the full weight of deflation would fall on the exchange rate, with the resulting costs being brought to bear on economic activity in the tradable sectors. Monetary policy also should attempt to influence inflationary expectations in a way that aligns them to future targets. As indicated, fewer expectations of inflation would help to reduce inflation for both tradable and non-tradable goods.
- As to policy instruments, the foregoing means it is absolutely necessary that real interest rates do not stay too low for a prolonged period of time, if the close in the output gap is to be moderate. The Bank's intervention rates will have to be raised at some point, and the decision as to when must consider monetary policy lags. If monetary policy reacts only to an obviously accelerated narrowing of the output gap, the anticipated impact on price stability will not be forthcoming and/ or extremely large hikes in interest rates would be required. By the same token, reducing interest rates for the sake of further depreciation would be inadvisable, because of the impact this would have on the output gap and on inflationary expectations. Also, it probably would not be effective in achieving more exchange depreciation over the short term.
- Therefore, the suggestion is that interest rates in the near future will have to be adjusted towards their long-term level. However, this need not begin immediately, particularly with the trend in the nominal exchange rate forecast for 2005 (See Chapter II).
- Given these considerations, the Board of Directors decided not to alter the intervention rates charged by Banco de la República during the third quarter of 2004 and voiced a commitment to reducing inflation targets towards levels that are consistent with long-term price stability.

Board of Directors Banco de la República

# INFLATION

Prepared by
Programming and Inflation Unit
Division of Economic Studies

TECHNICAL MANAGEMENT OFFICE José Darío Uribe E.

#### Manager

DIVISION OF ECONOMIC STUDIES
Hernando Vargas Herrera
Assistant Manager

PROGRAMMING AND INFLATION DEPARTMENT
Juan Mauricio Ramírez Cortés **Director** 

Inflation Section (\*) Aldolfo León Cobo Serna

#### Head

Edgar Caicedo García Luisa Fernanda Charry Luz Adriana Flórez Flórez Alejandro Reyes González José Luis Torres Trespalacios Andrés Mauricio Velasco Martínez

(\*) This report was prepared with the help of Gloria Alonso Másmela, Head of the Macroeconomic Programming Section, Franz Hamann Salcedo, Director of the Macroeconomic Models Department, Martha López, Luis Fernando Melo Velandia, Norberto Rodríguez Niño and Julián Pérez Amaya.

# I. THE CURRENT ECONOMIC SITUATION

In the third quarter, external and domestic conditions were favorable for economic growth. Inflation continued to fall, mainly because of tradable goods and certain controlled goods and services.

External and domestic conditions for growth of the Colombian economy remained favorable throughout the third quarter of 2004. As predicted in earlier reports, the economy grew by 4.16% during the first six months of the year, and information by sector for the third quarter suggests no major change in this trend.

External demand and particularly private investment continued to be the main sources of growth. The Colombian peso continued appreciate, as has been the case throughout the year.

In this context, core inflation during the third quarter was determined primarily by the exchange rate path and by evolution of the output gap. Inflationary expectations and costs do not appear to have changed much.

# A. THE EXTERNAL CONTEXT, EXCHANGE RATE AND TRADABLES PRODUCTION

The Latin American economies continue to grow at a good pace, thanks to more external demand, high prices for commodities and broad international liquidity, despite increases in external interest rates.

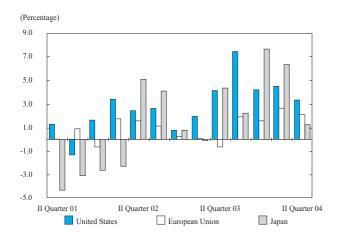
As expected, the world economy continued to expand. Once again, this increase was led by the United States and China, and less by the Euro zone and Japan, where growth was moderate (Graph 1). In the second quarter, real growth in the U.S. economy (annualized quarterly) was 3.3%, basically because of private investment, while external demand contributed negatively, given to the slight rise in exports. Nevertheless, the most recent indicators suggest growth will continue to improve. The annual rise in industrial production at August was

5.2%, up slightly from the month before, while use of installed capacity has remained at around 77%, showing a higher margin on growth. There were some signs of improvement in the job market, although job creation was weak. Both these elements were mirrored in unemployment, which fell to 5.4%.

Economic growth in Japan was moderate compared with last quarter, registering an increase of 1.2% in real economic growth (annualized quarterly). Once again, this was due to private consumption and external demand from Asia, Europe and the United States. Public investment in the Japanese economy has fallen sharply, while private investment remains steady.

#### GRAPH 1

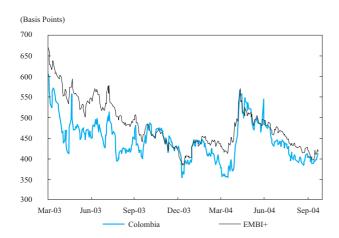
# ANNUALIZED QUARTERLY GDP GROWTH IN THE UNITED STATES, THE EURO ZONE AND JAPAN



Source: Datastream.

#### GRAPH 2

# COUNTRY RISK PREMIUM EMBI + LATIN AMERICAN COUNTRIES



Source: Bloomberg

Recovery in the Euro zone stayed moderate, but consistent. The growth rate (annualized quarterly) for the second quarter was 2.1%, backed by strong external demand and private consumption. According to the European Central Bank (ECB), second-quarter industrial production rose by 0.8% with respect to the previous quarter. However, the job market has not improved. The unemployment rate is 9% and has not changed since April 2004.

There has been increased momentum in the emerging economies. The Asian economies continue to depend on the force of economic growth in China. In September, investment in China registered 27.9% annual growth, while the increase in monetary aggregates continued to drop because of the stabilization policy being applied by China's economic authorities. Yet, this has not been enough to control inflation, which is still above 5.0%. On the other hand, the Latin American economies continue to grow at a good pace, thanks to more external demand, high prices for commodities and broad international liquidity, despite higher external interest rates.

Added growth in the emerging economies has improved financial conditions for most Latin American countries. Graph 2 shows their countryrisk premiums (spreads) continue to decline, after

an increase in May when the U.S. Federal Reserve Bank raised interest rates. The bond rating agencies have improved their assessment of the sovereign debt of countries such as Brazil and Venezuela, inspiring larger capital flows.

The rise in influxes of capital also is explained, in part, by the low return on investments in the United States due to interest rates, which are still quite low. Prospects for a weaker dollar, given the fiscal and current account deficits confronting the U.S. economy, are also a factor. In this respect, exchange rates continue to benefit from better external conditions and a weak dollar, leaning towards appreciation of most Latin American currencies (Graph 3).

With the steady rise in oil prices, Venezuela and Ecuador, two of Colombia's major trading partners, have seen their economies grow at a fast pace. The political situation in Venezuela has stabilized, which means even better prospects for short-term growth. As for Ecuador, the economy continues to expand at the same pace. However, there are doubts about the possibility of moving ahead with reforms to improve its fiscal situation, which would enhance prospects for sustained growth.

As indicated in the last report, fears about possible inflationary pressures in the developed economies were associated with the impact of more economic growth and high energy prices. Despite a slight decline in total U.S. inflation (2.5% at September as opposed to 2.7% in August), core inflation rose by 2% (compared with 1.7% in August) (Graph 4). In this sense, inflationary pressures are still a risk, particularly with the higher forecasts for oil prices at the end of this year and in 2005.

The U.S. Federal Reserve Bank has maintained its policy of moderate increases in the reference rate.

#### NOMINAL EXCHANGE RATE INDEX: ARGENTINA, BRAZIL, CHILE AND COLOMBIA

(January 2, 2003 = 100) 105.0 100.0 95.0 90.0 85.0 80.0 75.0 Mar-03 Jun-03 Sep-03 Dec-03 Mar-04 Jun-04 Sep-04 Chile Colombia Brazil Argentina

110.0 105.0 100.0 95.0 90.0 Jan-04 May-04 Jul-04 Sep-04 Brazil - - · Chile Colombia

(January 1, 2004 = 100)

Source: Datastrean

#### ANNUAL INFLATION IN THE UNITED STATES (LAST 12 MONTHS)

(Percentage) 3 7 3.4 3.1 2.8 2.5 2.2 1.9 13 1.0 Mar-01 Sep-01 Mar-03 Sep-03 Mar-02 Sep-02 Mar-04 - Basic

Source: Datastream

The implications of this situation are essentially two: exchange appreciation and positive growth in terms of exports and gross domestic product (GDP) in the sectors producing tradable goods.

However, this adjustment has yet to place a major constraint on international liquidity. In fact, since the rise in April, market rates for U.S. Treasury Bonds have declined, especially for longer maturities (Graph 5).

The high commodity prices reported the second quarter of this year have not declined, particularly for Colombia's main exports (i.e. nickel and coal, among others). This is due the rise in demand fueled by economic growth worldwide, especially in China (Graphs 6, 7, 8 and 9). Oil, however, has been the only product to see a steady price rise, even despite the efforts of the Organization of Oil Exporting Countries (OPEC) to increase production in response to world demand. Constant terrorist attacks in Iraq and production problems in countries like Russia (related to the difficulties Yukos is having) and Nigeria (because of the internal conflict) have pushed oil prices to record highs (US\$50/barrel) (Graph 19). Low oil stocks in the United States and the decline in OPEC's spare capacity are factors as well. In short, high oil prices continue to threaten world economic growth <sup>1</sup>.

The Colombian economy continues to benefit from better external conditions and high prices for its leading export commodities, net capital influxes from foreign direct investment (FDI), and changes in foreign assets. The implications of this situation are essentially two: exchange appreciation and positive growth in terms of exports and gross domestic product (GDP) in the sectors producing tradable goods.

Exchange appreciation was more pronounced in July and August. However, this trend was corrected somewhat at end of September and early October due to steps taken by the Board of Directors of Banco de la República. Peso appreciation in recent months was linked to export performance, which was associated, as mentioned earlier, with high international prices and solid growth in the world economy. Venezuela's recovery was particularly important. The trend in the exchange rate also has been influenced by a net influx of capital that is larger than expected (especially with respect to FDI and by movement in the position of external assets held by domestic agents). This is despite higher external interest rates. The larger capital influx probably also reflects more confidence among foreign and domestic investors, thanks to by good economic results in recent quarters and better security. In addition to local factors, peso appreciation also should be understood in the context of a weak dollar compared with most currencies, even those in Latin America. This is attributed to the persistence of external and fiscal imbalances in the United States.

In addition to local factors, peso appreciation also should be understood in the context of a weak dollar compared with most currencies, even those in Latin America. This is attributed to the persistence of external and fiscal imbalances in the United States.

According to the last World Economic Outlook (WEO) report by the International Monetary Fund (IMF), a sustained increase of US\$5 per year in oil prices can reduce world economic growth by 0.3%.

# U.S. TREASURY BOND INTEREST RATE



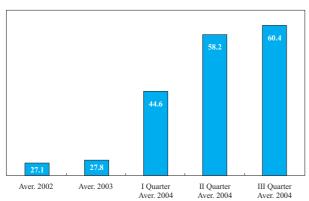


Source: Datastream.

GRAPH 6

#### INTERNATIONAL AUSTRALIAN COAL PRICES

#### (Dollars/Metric Ton)

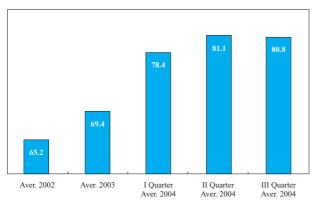


Source: World Bank (Pinksheet).

GRAPH 7

#### INTERNATIONAL COFFEE PRICES

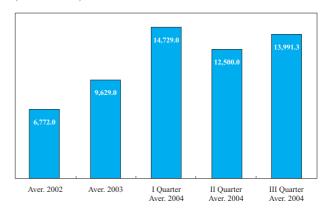
#### (US\$ cents/pound)



Source: Datastream

# INTERNATIONAL NICKEL PRICES

#### (Dollars/Metric Ton)

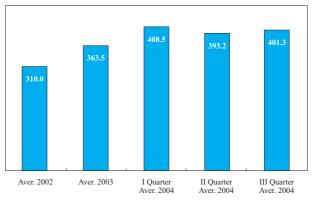


Source: World Bank (Pinksheet).

GRAPH 9

#### INTERNATIONAL GOLD PRICES

#### (Dólares / Onza troy)

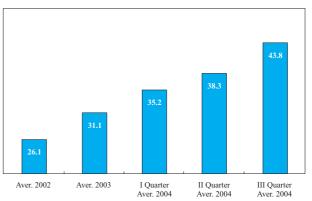


Source: World Bank (Pinksheet).

GRAPH 10

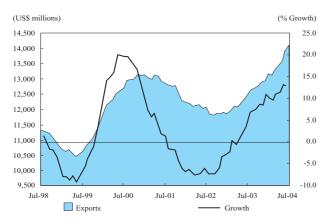
#### INTERNATIONAL OIL PRICES - WTI

#### (Dollars/Barrel)



Source: Bloomberg.

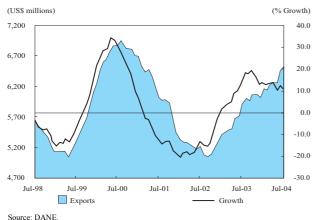
#### TOTAL EXPORTS (LAST 12 MONTHS)



Source: National Bureau of Statistics (DANE)

#### GRAPH 12

#### TRADITIONAL EXPORTS (LAST 12 MONTHS)



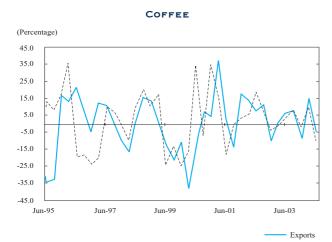
Source: DANE.

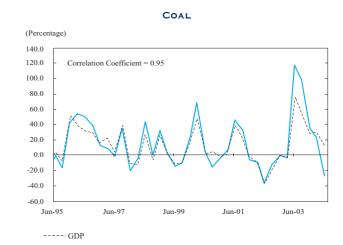
Export growth continued in terms of volume and price (Graph 11). By July, traditional exports were increasing at a healthy pace, primarily due to better terms of trade<sup>2</sup> (Graph 12). Although coffee exports declined in volume at a rate of nearly 1%, their value has increased by 8.1%. Oil exports declined by almost 6% in volume, but their value grew at an annual rate of 6.3%. In July, the annual increase in coal exports was 11.8%.

The outlook for the coffee sector has improved during 2004, although the end of the coffee-year in September saw a reduction of 659 thousand 60-kilo sacks (6% less production compared with the same period a year earlier). Better international prices, less inventory, and expectations about Brazilian production suggest the sector could continue to recover in the coming year. The increase in coal production and exports in 2004 was determined by the high production base in 2003 (Graph 13).

#### GRAPH 13

# EXPORTS VERSUS GDP FOR CERTAIN COMMODITIES (ANNUAL GROWTH)





To avoid volatility and possible seasonal effects, the analysis of exports contains figures for the accumulated 12 months.

There were high annual increases in non-traditional exports. Sales of these products in 2004 reflect two contradictory trends. Exports to Venezuela and Ecuador recovered and even accelerated, as did those to Mexico, the Caribbean and other South American countries. As a whole, they account for 75.4% of Colombia's non-traditional exports. On the other hand, non-traditional exports to the United States slowed from around 25% at the beginning of 2004 to more moderate levels on the order of 10% by July (Graph 14).

Clothing has affected industrial exports to the United States, with up to 60% accumulated growth in 12 months. This pace has declined but is still around 20% (Graph 15). However, other sectors that were propelling the growth in non-traditional exports to the United States have not done well (graphs 16 and 17). Bananas and flowers are prime examples. With -7% growth (exports accumulated in 12 months at July), the banana sector has seen difficult times since the start of last year, with high volatility and low growth. A labor strike and weather problems in early 2004 affected production during the first six months of the year.

Flower exports, up 0.85% in 12 months, could have been affected by entry of the sub-Saharan countries into the international market and by weather problems that hit production areas at crucial times of the year for flower sales.

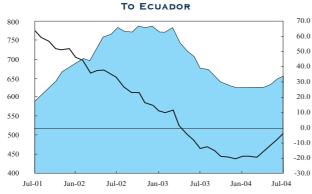
The momentum in exports has contributed to the growth in other sectors producing tradable goods. Mining and industry are two examples, with 4.8% and 5.2% average annual growth, respectively, in the first half of 2004 (Graph 18). In fact, industrial growth accelerated between the first and second quarters of the year, and third-quarter data released by the National Association of Industrialists (ANDI) showed this growth has continued, as do figures from the National Bureau of Statistics Monthly Manufacturing Sample (DANE). This is after being revised for seasonality and working days (Graph 19).

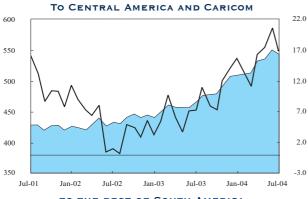
Although some analysts claim recent information from several industrial surveys points to a possible slowdown in industry, we do not agree entirely. For example, in the business opinion poll conducted by Fedesarrollo, a decline in positive replies and an increase in neutral replies explain the fact that the outlook is not as optimistic, compared with 2004. This should be interpreted in the sense that the current situation is expected to continue and not deteriorate. The historical level of these indicators also must be taken into account. For example, although the order indicator (tendency component) has declined since April or May 2004, it is now at a point not seen since the mid-nineties. Also, similar reductions in this indicator were evident during boom years in the industrial sector, when it was similar to or even below current levels (Graph 20).

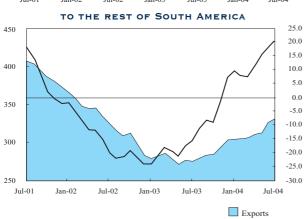
The momentum in exports has contributed to the growth in other sectors producing tradable goods. Mining and industry are two examples, with 4.8% and 5.2% average annual growth, respectively, in the first half of 2004.

# NON-TRADITIONAL INDUSTRIAL EXPORTS (LAST 12 MONTHS)

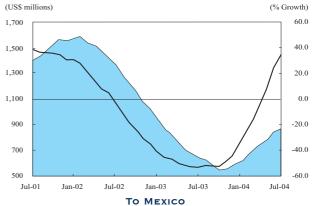
#### TO THE UNITED STATES (US\$ millions) (% Growth) 20.0 2,100 15.0 2,050 5.0 2.000 1,950 0.0 1,900 -5.0 1,850 -10.0 1,800 1.750 -15.0 Jul-03 Jul-02 Jan-04 Jul-04 Jul-01 Jan-02 Jan-03



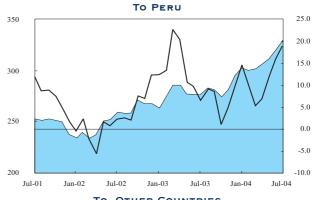


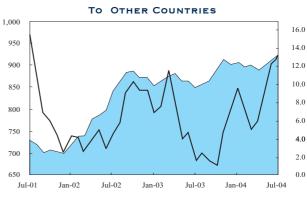


#### TO VENEZUELA





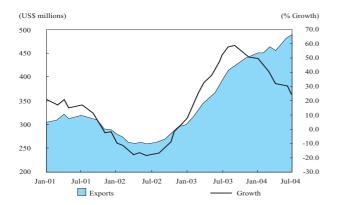




- Growth

Source: DANE.

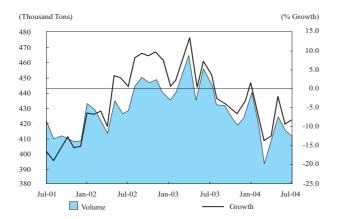
# CLOTHING EXPORTS TO THE UNITED STATES (LAST 12 MONTHS)



Source: DANE.

#### GRAPH 16

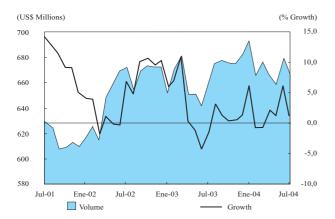
# BANANA EXPORTS TO THE UNITED STATES (VOLUME LAST 12 MONTHS)



Source: DANE.

#### GRAPH 17

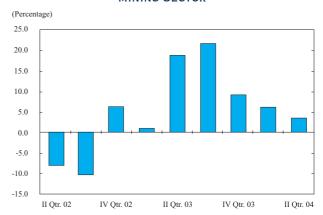
# FLOWER EXPORTS TO THE UNITED STATES (LAST 12 MONTHS)



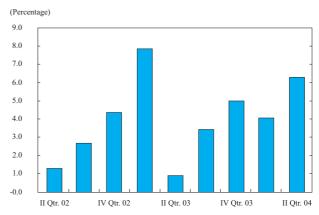
Source: Datastream.

# ANNUAL GDP GROWTH IN DIFFERENT SECTORS

#### MINING SECTOR



#### INDUSTRIAL SECTOR

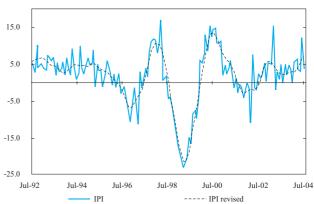


Source: DANE.

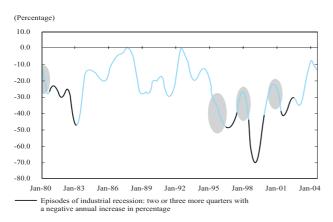
#### CDADU 10

# ANNUAL GROWTH IN THE INDUSTRIAL PRODUCTION INDEX, REVISED BY WORKING DAYS, SEASONALITY AND NOISE

(Percentage)



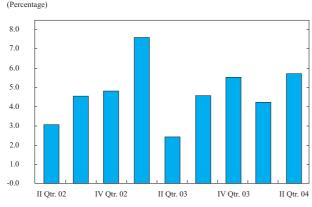
#### ORDERS (TENDENCY COMPONENT)



Source: Fedesarrollo.

#### GRAPH 21

#### ANNUAL GROWTH IN DOMESTIC DEMAND



Source: DANE.

# B. Domestic Demand and Non-tradable Goods Production

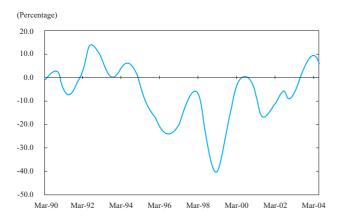
The internal situation continued to favor growth in domestic demand, which was up by 5.0% in the first half of the year (Graph 21). Private investment was the most dynamic component, having increased at rates between 17% (agricultural capital formation and machinery and equipment) and 30% or more (transportation and construction equipment and buildings).

Business (industrial) confidence in the economic outlook for the country remained high, comparable only to several months in 1992. Consumer confidence also was high, despite having dipped slightly in July and August, primarily because of the change in confidence for 2005. In our opinion, it went from being considered better to the same as this year (Graph 22).

#### GRAPH 22

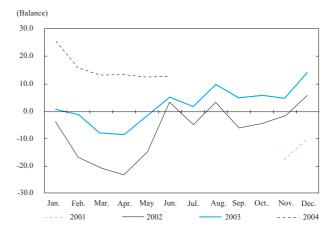
#### INDICATORS OF CONFIDENCE

#### INDUSTRIAL (TENDENCY COMPONENT)



Source: Fedesarrollo.

#### CONSUMER



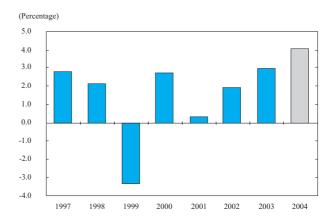
On the other hand, there are signs that private disposable income has improved during the year to date and will surpass GDP growth in 2004 (Graph 23). For the most part, this would be due to a substantial improvement in conditions for employment, as was evidenced in August by a lower unemployment rate. This applies to both the national total and unemployment for the 13 major cities<sup>3</sup> (Graph 24).

Lately, the unemployment situation in Colombia has been characterized by two trends. The first, which is evident in the global participation rate (GPR), is a decline in the economically active population as a share of the working-age population. The second is an improvement in job quality, as reflected in the decline in underemployment and a growth in other employment (Graph 25).

Although some analysts suggest the lower GPR could signal a increase in "discouraged workers", it actually could mean the improvement in employment and job conditions is beginning to be mirrored in better and more stable levels of family income. The increase in the number of self-declared unemployed who enrolled in the educational system in recent months is an indicator that could confirm this interpretation (Graph 26).

The second feature of the job market during 2004 is the change in job quality. Although fewer new jobs are being created, if they are broken down between the job holders who reported being underemployed and those who are not, this last category increases by nearly 250 thousand employed people (average per year), while the level of underemployment declines in absolute terms. This interpretation appears to be supported by figures from the Banking Superintendent on the number of people who are affiliated with individual pension funds that involve solidarity payments (Graph 27).

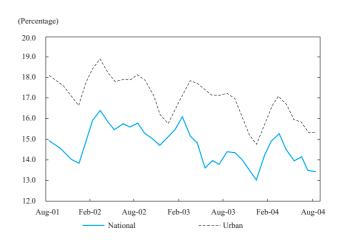
#### GROWTH IN PRIVATE REAL DISPOSABLE INCOME



Source: DANE and DIAN. Banco de la República calculations.

GRAPH 24

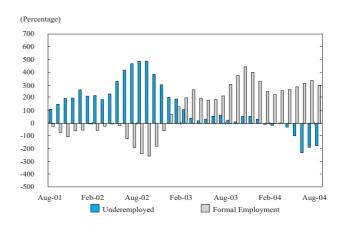
## UNEMPLOYMENT RATE (THREE-MONTH MOVING AVERAGE)



Source: DANE (Continuous Household Survey )

GRAPH 25

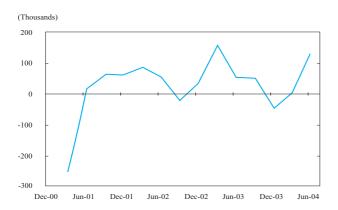
#### BREAKDOWN OF URBAN JOBS CREATED



Source: DANE (Continuous Household Survey ).

To avoid problems of signification in the monthly fluctuations in employment that come from the DANE Continuous Household Survey (ECH), the indicators are based on three-month moving averages for the population groups measured by the survey.

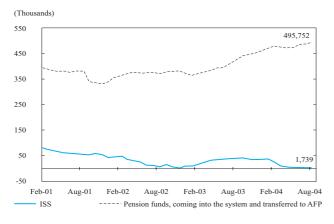
## ANNUAL VARIATION IN SCHOOL ATTENDANCE AMONG THE «INACTIVE» POPULATION



Source: DANE. Banco de la República calculations

#### GRAPH 27

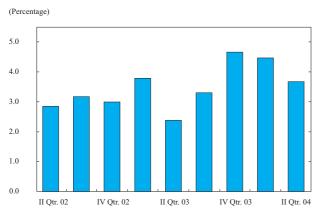
## ANNUAL VARIATION IN AFFILIATES OF THE INDIVIDUAL PENSION SYSTEM, WITH SOLIDARITY PAYMENTS



Source: Banking Superintendent. Banco de la República calculations.

#### GRAPH 28

# ANNUAL GDP GROWTH IN NON-TRADABLES SECTORS



Source: DANE.

These two factors combined (the drop in GRP and job creation) reduced unemployment in August 2004 by 2% in the 13 major cities and by 1% nationwide. They also continued to allow for GDP growth in nontradable sectors up to the second quarter, according to figures from DANE. The latest indicators for trade and construction, among others (Graph 28), indicate this trend continued during the third quarter. The growth in public GDP was well below total GDP, as evidenced by the increase in public consumption during the first half of the year (2.6%) and by the decline in civil works (-31.8%).

Domestic demand continues to be fueled mostly by private investment in building and construction (which was up by 32.7% in the second quarter) and by fixed capital formation (up by 13.6%). August figures on imported capital goods (20% annual growth) suggest the momentum in private investment will continue during the third quarter.

# C. THE FACTORS DETERMINING INFLATION

The variables that determined inflation in the third quarter are described in terms of four principal channels: (1) the exchange rate, (2) aggregate demand and the output gap, (3) inflationary expectations and (4) costs. The major shocks to inflation during the third quarter are discussed as well.

#### 1. The Exchange Rate Channel

The increase in core inflation during 2003 and its subsequent decline was primarily due to the exchange rate. This also is one of the main factors in current inflation, which is below target. Nevertheless, it did far less to lower annual inflation during the last quarter than at the start of the year, even though the peso continues to appreciate. This could be due to

the impact of inflationary inertia and inflationary expectations on tradable goods<sup>4</sup>.

#### 2. The Output Gap

The slow but steady rise in non-tradables inflation indicates the output gap has continued to close and demand is having more of an effect on inflation. However, there is still considerable uncertainty about the size of the gap. Most statistical measurements point to gradual closure, but differ substantially with respect to its extent.

Sectoral measurements taken by ANDI and Fedesarrollo, including use of installed capacity (UIC), show these indicators have been at their historic averages since the second quarter (Graph 29). A sectoral analysis indicates that more industrial manufacturing sectors are surpassing the historic average in this respect (Table 1).

TABLE 1

## USE OF INSTALLED CAPACITY (\*) (PERCENTAGE)

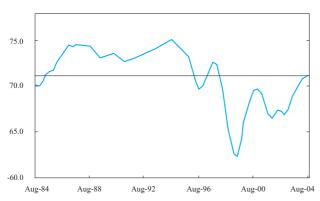
Beverages Glass, porcelain, china, clay Machinery, other than electrical Metallic products, other than machinery Cement and other non-metallic products Base metals Tobacco Clothing Transport equipment and materials Electrical and electronic equipment Printing and publishing Textiles Plastic products Paper and cardboard Wood and manufactured goods, furniture Industrial chemical substances Leather and manufactured leather goods, footw Rubber products Food Oil and by-products Other chemical products Other manufactured goods	November	February	Mayo	August		
	2003	2004	2004	2004	Average: 1991-2004	
Beverages	40.0	75.0	85.0	82.5	65.2	
Glass, porcelain, china, clay	68.0	80.0	92.0	92.0	77.2	
Machinery, other than electrical	63.3	69.4	70.0	70.0	63.1	
	71.1	65.4	69.8	70.2	63.3	
Cement and other non-metallic products	58.9	65.0	73.0	73.0	67.2	
Base metals	75.0	79.3	76.7	77.1	71.4	
Tobacco	65.0	55.0	55.0	55.0	50.3	
Clothing	65.4	66.0	72.3	73.6	70.2	
Transport equipment and materials	73.2	63.9	68.2	68.9	66.0	
Electrical and electronic equipment	61.7	67.5	66.2	66.2	64.0	
Printing and publishing	72.9	65.0	67.0	68.8	66.6	
Textiles	77.4	75.6	78.3	76.5	75.3	
Plastic products	71.6	72.4	71.2	73.0	72.1	
Paper and cardboard	80.0	77.5	72.5	75.0	74.6	
Wood and manufactured goods, furniture	62.9	66.7	73.0	66.9	66.5	
Industrial chemical substances	79.6	77.8	73.1	72.2	72.7	
Leather and manufactured leather goods, footwea	r 67.1	70.0	61.7	66.4	67.2	
Rubber products	65.0	62.9	60.0	61.7	64.0	
	73.2	70.9	71.6	72.1	74.9	
Oil and by-products	80.0	80.0	80.0	80.0	83.9	
	71.4	71.1	65.2	66.7	71.2	
	60.0	66.0	58.0	58.0	67.2	
Total	71.2	70.0	70.4	71.0	69.8	

<sup>(\*)</sup> The figures in bold type denote the sectors with above average UIC. Source: Fedesarrollo. Banco de la República calculations.

In a recent simulation conducted by the Economic Studies Unit (SGEE) at Banco de la República, tradables inflation is determined by delayed inflation (with a coefficient of 0.89), by inflationary expectations (coefficient of 0.05) and by a variable associated with the exchange rate and external inflation (coefficient of 0.06).

# USE OF INSTALLED CAPACITY (TENDENCY COMPONENT)

#### FEDESARROLLO



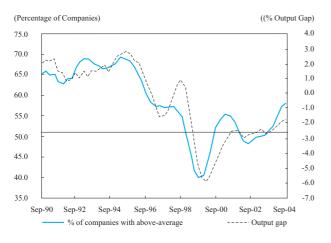
Source: ANDI. Banco de la República calculations.

# 75.0 70.0 65.0 Jul-98 Jul-99 Jul-00 Jul-01 Jul-02 Jul-03 Jul-04

Source: Fedesarrollo. Banco de la República calculations.

#### GRAPH 30

# PERCENTAGE OF COMPANIES WITH INSTALLED CAPACITY ABOVE THE HISTORIC PERIOD



Source: Fedesarrollo. Banco de la República calculations.

Other indicators are at levels similar to those in the mid-nineties. One example is the percentage of companies with UIC above their historic average, which increased compared with three months ago (Graphs 29 and 30). Another is the indicator of demand as an obstacle to raising low production (Graph 31).

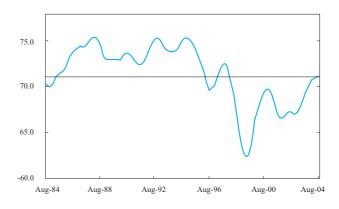
At any rate, growth in investment last year and during the course of 2004 up to July, coupled with the rise in several indicators of industrial productivity, suggest potential GDP could increase more in 2004 than in previous years, which is an important point to remember. Furthermore, although unemployment has declined, it is still high and exceeds the Bank's NAIRU measurements. The present report maintains the assumption that potential GDP growth for 2004 will be 3.6%.

#### 3. Other Channels

Inflationary expectations and costs are the other two factors that weight heavily on inflation. The current year has seen no major changes in inflationary expectations. According to the quarterly survey, they

#### GRAPH 31

#### DEMAND AS THE MAIN PROBLEM FOR BUSINESSMEN (\*) (TENDENCY COMPONENT)



(\*) Percentage of industrial companies that regard lack of demand as the main constraint to growth in their production.
Source: ANDI. Banco de la República calculations.

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remained near the top of the target-range (Graph 32). The monthly survey placed them at the middle (Graph 33).

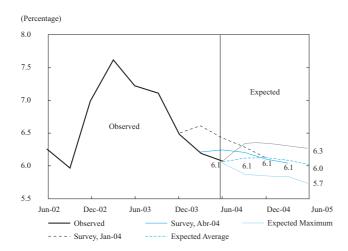
As to costs, there are signs of pressure in specific sectors producing raw materials such as steel and certain construction materials. Rising fuel prices are also exerting a good deal of pressure. However, these pressures tend to be neutralized by appreciation. As a result, recent quarters have seen no generalized increase in costs (Graph 34).

Figures released by ANDI indicate pressure from the cost of raw materials leveled off as of May (Graph 35), while information from the MMM on the unitary cost of labor suggests pressure from labor costs in this sector would not be significant (Graph 36).

Supply shocks continued to have a negative impact on inflation, especially for food and fuel. The recent trucking strike affected food inflation, primarily for perishables. On the other hand, thanks lower water rates, pubic utilities have experienced some unexpected relief not anticipated three months ago. These reductions, which were ordered recently, are explained in the next section.

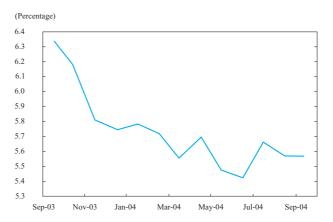
CDARH 33

#### QUARTERLY SURVEY OF INFLATIONARY EXPECTATIONS



Source: Banco de la República

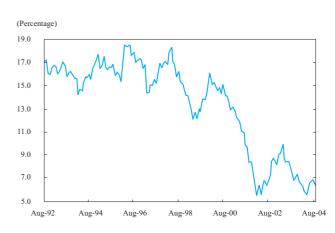
#### MONTHLY SURVEY OF INFLATIONARY EXPECTATIONS



Source: Banco de la República.

GRAPH 34

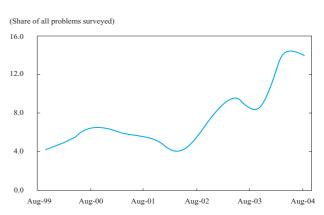
#### **ANNUAL INCREASE IN TOTAL COSTS**



Source: Banco de la República.

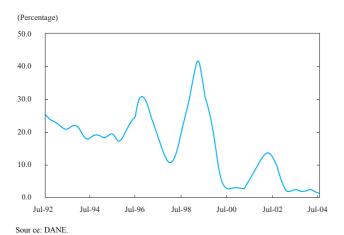
GRAPH 35

#### RAW MATERIAL COSTS AS THE PRINCIPAL PROBLEM FOR BUSINESSMEN (\*) (TENDENCY COMPONENT)



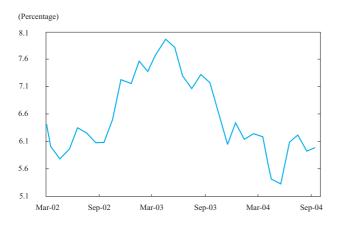
(\*) Percentage of industrial companies that consider lack of demand the main constraint to growth in their production.

# ANNUAL VARIATION IN THE NOMINAL UNITARY COST OF LABOR PER HOUR WORKED IN INDUSTRY (TENDENCY COMPONENT)

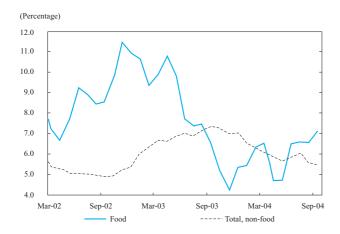


#### GRAPH 37

#### **ANNUAL CONSUMER INFLATION**



# BROKEN DOWN INTO FOOD AND TOTAL NON-FOOD INFLATION



Source: Banco de la República.

#### D. THIRD-QUARTER INFLATION

Annual inflation at September was 6%, similar to the rates in June and March (6.1% and 6.2%, respectively) (Graph 37). Food inflation jumped during the past month (7.2% opposed to 6.5% in June), probably because of the trucking strike, which had a serious impact on perishables. These products, which include items such as potatoes and other tubers, vegetables and fruits, experienced some of the highest price increases. Non-food inflation went from 5.9% in June to 5.4% in September.

Non-food inflation was 0.5 percentage points (pp) below the forecast in the June report, while food inflation was 0.7 pp above. As to the aggregate, the Bank overestimated total inflation by 0.1 pp. The forecasts for non-food inflation did not anticipate the downward adjustments or lack thereof in certain controlled prices, especially those for water and transportation.

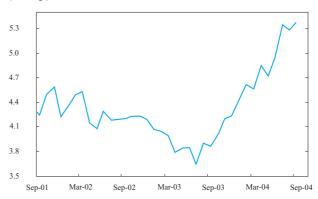
Core inflation continued to fall during the third quarter, despite a slight rise in July. The average of the three indicators used by the Bank (non-food inflation, nucleus 20, and inflation without staple foods, public utilities and fuel) fell to 5.4%, the lowest rate in the year. (Graph 38). This is almost 50 basis points (bp) less than in June (5.9%).

A breakdown of non-food inflation into tradables, non-tradables and controlled goods and services shows two trends. On the one hand, non-tradables inflation (excluding controlled prices) has been on the rise since June 2003 and accentuated this year. It was 5.4% at September and 4.9% at June (Graph 39). This increase was due to the rise in prices for rentals (from 4.3% to 4.6%) and other non-tradables (from 5.6% to 6.2%). The behavior of non-tradables inflation reflects gradual closure of the output gap. Moreover, some sectors may be adjusting their profit margins to take advantage of the currently good economic conditions. There may be cost pressures in specific sectors due to bottlenecks for some raw materials. However, they do not appear to be generalized.

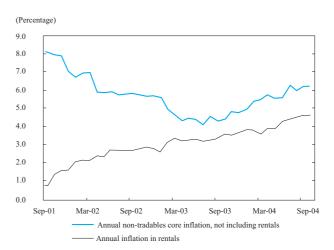
Tradables inflation continued to fall during the third quarter (from 4.3% in June to 3.8% in September) (Graph 40), but at a slower rate. For example, the reduction was 1.7 pp in the first quarter, 1.1 pp in the second and only 0.5 pp in the third, despite rising exchange appreciation. As mentioned earlier, this may be due to inflationary inertia and inflationary expectations concerning prices for these goods.

#### ANNUAL NON-TRADABLES CORE INFLATION

(Percentage)



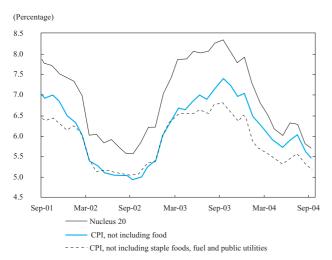
BROKEN DOWN INTO RENTALS AND THE REST



Source: Banco de la República

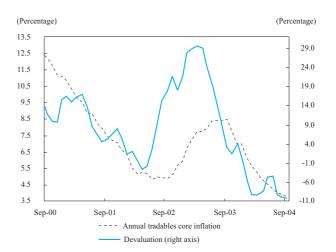
GRAPH 38

#### CORE INFLATION INDICATORS



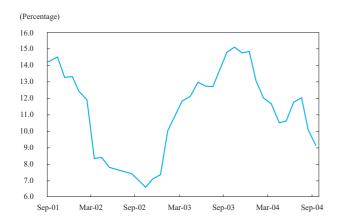
Source: Banco de la República

# ANNUAL TRADABLES CORE INFLATION AND DEVALUATION



Source: Banco de la República

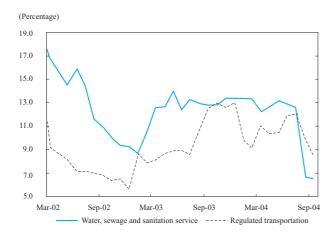
#### ANNUAL CORE INFLATION IN CONTROLLED PRICES



Source: Banco de la República.

#### GRAPH 42

### ANNUAL INFLATION IN CONTROLLED TRANSPORTATION, WATER AND SEWAGE RATES



Source: Banco de la República.

In addition to tradables, inflation in controlled prices (up from 9.1% in September to 11.8% in June) also helped to lower non-food inflation for the quarter (Graph 41). Several factors contributed to this reduction. One was the reduction in water and sewage rates following a new ruling on fixed charges that declared it unconstitutional for the utility companies that provide these services to pass their pension costs on to the consumer (Graph 42). Essentially, the decline in inflation is due to an August adjustment in the water and sewage rates in Bogota and Medellin, which lowered inflation in sewage rates (for the national total) from 12.9% in June to 6.6% in September. In addition, the hike in transportation rates, especially for the mass transit system (TransMilenio), was postponed, having been implemented in the third quarter of 2003. As a result, inflation in transportation subject to price controls was 8.3% at September as opposed to 11.9% at June. The rise in fuel prices is less than the forecast for the year, and less than last year, but further increases this year should not be ruled out.

As to other controlled prices, gas inflation was up from 0.2% in June to 2.6% in September, probably because of high international prices for crude oil. Energy inflation was 8.6% in June to 10.6% in September.

#### DISTRIBUTION OF INFLATION ADJUSTMENTS IN THE COURSE OF A YEAR

The following is an analysis of how inflation adjustments are distributed in a year, based on the seasonality of inflation in recent decades. It considers the trend in price distribution for the entire basket of goods and services in the consumer price index (CPI), differentiating between foods and non-foods.

Table R1.1 shows the percentage of annual inflation corresponding to each quarter and each six-month period. For example, between 1970 and 2004<sup>1</sup>, annual inflation was concentrated mostly in the first half of the year. During the last 35 years, on average, 67.3% of annual inflation has been produced during the first six months of the year. Interestingly, this trend has gained strength over time. For example, 63.2% of annual inflation in the seventies originated in the first six months of the year. During the past four years, this share increased to 78.0%.

A more detailed analysis of the information in Table R1.1 shows inflation adjustments are concentrated increasingly in the first quarter of the year. At present, more than half of annual inflation (54.1%) is produced during the first three months of the year, as opposed to 31.5% in the seventies.

TABLE B1.1

CONTRIBUTION OF THE PERIOD TO ANNUAL INFLATION

TOTAL CPI

(PERCENTAGE)

nflation		Qua	Half-year			
	1	II	III	IV	1	II
Averages						
1970-1979	31.5	31.8	15.2	21.5	63.2	36.8
1980-1989	33.9	30.3	13.0	22.8	64.1	35.9
1990-1999	42.6	26.5	15.6	15.3	69.1	30.9
2000-2004	54.1	23.8	7.2	14.9	78.0	22.0
1970-2004	38.6	28.7	13.5	19.2	67.3	32.7
Years with El Niño	38.2	37.4	9.3	15.2	75.6	24.4
Years without El Niño	38.7	26.6	14.6	20.2	65.2	34.8
Years with single-digit inflatio	n					
(1999-2004)	54.2	22.8	8.1	14.9	77.0	23.0
/ears with double-digit inflation	35.5	29.9	14.7	19.9	65.4	34.6

<sup>&</sup>lt;sup>1</sup> Inflation between September and December 2004 was estimated with the traditional model used by the Economic Studies Unit at Banco de la República.

#### Why does this happen?

Empirical evidences suggests that market conditions and the pressure of competition are the main reasons why companies do not change their prices more often<sup>2</sup>. The existence of menu costs<sup>3</sup> discourages agents from constantly changing prices and helps to group these changes during a particular time of year. Because many contract prices (especially for work contracts) are adjusted at the beginning of the year, this probably is the best time to revise prices<sup>4</sup>.

#### How does El Niño affect the seasonality of inflation during the year?<sup>5</sup>

With the weather phenomenon known as El Niño, total inflation is more concentrated in the first half of the year (75.6% as opposed to 65.2% when El Niño does not occur) (Table R1.1), with the added characteristic that inflation tends to increase sharply in the second quarter (37.4% against 26.6%)<sup>6</sup>

#### In years with single-digit inflation, how has inflation been distributed?

In recent years with single-digit inflation, the bulk is produced in the first quarter (54.2% against 35.5% in other years) (Table R1.1). This is because the average duration of prices is less when inflation is high than when it is low (18 days as opposed to 34 days). Erosion in the real price of a particular item also is less when inflation is high<sup>7</sup>. The suggestion is that sellers readjust their prices more often during periods of high inflation, distributing these adjustments over a longer period of time and deconcentrating price growth in specific months.

A breakdown of the CPI basket into food and non-food items shows food to be largely responsible for the concentration of inflation in the first three months of the year (Table R1.2). As of the year 2000, 65.9% of annual food inflation, on average, has been produced in the first three months, compared with 26.8% in the seventies. The non-food

<sup>&</sup>lt;sup>1</sup> Inflation between September and December 2004 was estimated with the traditional model used by the Economic Studies Unit at Banco de la República.

<sup>&</sup>lt;sup>2</sup> Arosemena, Angélica (2002). "Fallas de coordinación y rigideces nominales de precios en Colombia," Graduation dissertation, Universidad Javeriana, Bogota.

Menu costs refer to the increase in production costs that originate with a change in price. A new price sometimes implies new packaging and ticketing, a change in computerized price lists, an adjustment in electronic tills, in addition to personnel and other costs.

<sup>&</sup>lt;sup>4</sup> These arguments obviously apply to the formation of prices for goods other than staple foods, which are determined mainly by supply factors. In the case of staple foods, seasonality depends on the seasonality of supply.

<sup>&</sup>lt;sup>5</sup> El Niño was rather intense in 1973/1974, 1976/1977/1978, 1982/1983, 1987/1988, 1991/1992, 1997/1998, 2002/2003. However, 1973, 1977, 1983, 1992 and 2002 were the years it was especially hard on crops and agricultural prices. These last years are included in our calculations.

This tendency is foreseeable, since the seasonality of foodstuffs behaves like an inverted "u", with extremely high prices in the second quarter of the year and a larger agricultural supply in the second half. A draught accentuates this seasonal behavior.

See Espinosa, A., Jaramillo, C.F. Caicedo, E. (2001). "Caracterización del ajuste microeconómico de precios en Colombia," Revista del Banco de la República, No. 891.

group behaves the same, although its price increases in recent years are not as concentrated in the first quarter (49.7%) (Table R1.3). In years where El Niño is a factor, 91.6% of food inflation is produced in the first six months, compared with 70.7% in years with normal weather.

TABLE B1.2

CCONTRIBUTION OF THE PERIOD TO ANNUAL INFLATION
FOOD CPI
(PERCENTAGE)

Inflation		Qua	Half Year			
	1	П	Ш	IV	1	II
Averages						
1970-1979	26.8	43.8	7.4	22.0	70.6	29.4
1980-1989	34.1	35.6	7.2	23.1	69.6	30.4
1990-1999	48.2	28.7	8.2	14.9	76.9	23.1
2000-2004	65.9	23.9	(7.1)	17.3	89.8	10.2
1970-2004	40.6	34.3	5.5	19.6	74.9	25.1
Years with El Niño	40.1	51.5	(1.5)	9.9	91.6	8.4
Years without El Niño	40.7	30.0	7.3	22.0	70.7	29.3
Years with single-digit inflatio	n					
(1999-2004)	69.2	18.1	(5.0)	17.7	87.4	12.6
Years with double-digit						
inflation	36.0	37.3	7.3	19.4	73.3	26.7

Source: DANE. Banco de la República calculations.

TABLE B1.3

CONTRIBUTION OF THE PERIOD TO ANNUAL INFLATION
NON-FOOD CPI
(PERCENTAGE)

Inflation		Qua	Half Year			
	1	II	Ш	IV	1	11
Averages						
1970-1979	32.3	27.8	18.0	21.9	60.1	39.9
1980-1989	33.7	27.7	16.1	22.6	61.3	38.7
1990-1999	40.7	25.0	18.6	15.8	65.6	34.4
2000-2004	49.7	23.3	14.5	12.5	73.0	27.0
1970-2004	37.6	26.3	17.1	19.0	63.9	36.1
Years with El Niño	37.7	29.8	14.9	17.5	67.6	32.4
Years without El Niño	37.5	25.4	17.7	19.4	63.0	37.0
Years with single-digit inflation	۱					
(1999-2004)	48.8	23.9	14.6	12.7	72.7	27.3
Years with double-digit						
inflation	35.3	26.6	17.9	20.2	61.9	38.1

#### What is the seasonality of non-food inflation components?

A breakdown of the non-food CPI into tradables, non-tradables and controlled goods and services shows non-tradables are largely responsible for the concentration of inflation during the first half of the year (Table R1.4). In recent decades, one characteristic of tradables other than food is that their inflation has been concentrated more in the first quarter, particularly during years when inflation has been low (Table R1.5). However, in years when El Niño is a factor, tradables inflation tends to originate less in the first six months, particularly in the first quarter. As to the

TABLE B1.4

CONTRIBUTION OF THE PERIOD TO ANNUAL INFLATION

NON-FOOD CPI

(PERCENTAGE)

Inflation		Qua	Half Year			
	ı	II	III	IV	1	II
Averages						
1980-1989	39.0	22.7	20.8	17.5	61.7	38.3
1990-1999	43.9	25.3	17.8	13.0	69.2	30.8
2000-2004	58.5	20.0	10.8	10.7	78.5	21.5
Years with El Niño	46.0	23.2	17.8	13.1	69.2	30.8
Years without El Niño	45.6	23.3	17.0	14.2	68.9	31.1
Years with single-digit inflation						
(1999-2004)	59.7	21.6	9.4	9.3	81.4	18.6
Years with double-digit						
inflation	40.4	23.9	20.0	15.7	64.3	35.7

Source: DANE. Banco de la República calculations.

TABLE B1.5

CONTRIBUTION OF THE PERIOD TO ANNUAL INFLATION

TRADABLES CPI (WITHOUT FOOD)

(PERCENTAGE)

Inflation		Qua	Half Year			
	ı	II	III	IV	1	II
Averages						
1980-1989	23.1	26.5	26.0	24.5	49.5	50.5
1990-1999	35.9	27.4	19.0	17.6	63.4	36.6
2000-2004	47.0	24.8	13.3	14.9	71.7	28.3
Years with El Niño	29.6	25.4	21.3	23.7	55.0	45.0
Years without El Niño	35.7	26.9	19.6	17.8	62.6	37.4
Years with single-digit inflation						
(1999-2004)	45.4	23.6	14.8	16.2	69.0	31.0
Years with double-digit						
inflation	30.2	27.6	21.9	20.3	57.8	42.2

non-tradables component, inflation has been concentrated more in the first quarter of the year and its seasonality is not affected by bad weather (El Niño). In periods when inflation is low, its seasonal concentration builds during the first quarter. The predominant feature of inflation in controlled goods and services is the fact that its seasonality, in years with single-digit inflation, intensifies during the second quarter of the year, losing importance in the first (Table R1.6). This trend repeats itself throughout the period in question. With inflation at current levels, the seasonality of inflation in the future is expected to remain the same or to increase in the first three months of the year.

TABLE B1.6

CONTRIBUTION OF THE PERIOD TO ANNUAL INFLATION

CONTROLLED CPI (NOT INCLUDING FOOD)

(PERCENTAGE)

Inflation		Qua	Half Year			
	1	II	Ш	IV	1	П
Averages						
1980-1989	44.3	12.8	17.0	25.9	57.1	42.9
1990-1999	46.8	18.3	18.8	16.2	65.1	34.9
2000-2004	45.5	25.5	13.4	15.6	71.0	29.0
Years with El Niño	46.9	15.6	15.5	21.9	62.5	37.5
Years without El Niño	45.3	18.9	17.4	18.3	64.3	35.7
Years with single-digit inflation						
(1999-2004)	42.5	27.4	14.7	15.5	69.9	30.1
Years with double-digit						
inflation	46.9	14.7	17.9	20.5	61.6	38.4

# II.THE MACROECONOMIC OUTLOOK

In the coming quarters, inflation will continue to depend on two opposite tendencies: low or declining inflation in tradable goods reflecting accumulated exchange appreciation, and rising non-tradables inflation due to the recovery in demand and gradual closure of the output gap.

At the close of the third quarter, the outlook for the global and domestic economies over the short and medium term remains favorable, and there is still no expectation that higher oil prices will change the prospects for growth worldwide. This being the case, the economy is expected to continue to expand throughout the remainder of the year and in 2005 at a rate similar to that of recent quarters.

The present report contains a lower forecast for non-food inflation by the end of 2004. This is due mainly to the decline in non-food inflation resulting from a reduction in the forecasts for tradables and controlled prices. Increased exchange appreciation is a factor in this respect. There have been no fundamental changes in the long-term outlook for inflation in relation to recent reports. Inflation over the medium and long term will continue to depend on two opposite tendencies: low or declining inflation in tradable goods, reflecting accumulated exchange appreciation, and rising non-tradables inflation, due to the recovery in demand and gradual closure of the output gap.

#### A. THE EXTERNAL CONTEXT

The forecast for nonfood inflation by the end of 2004 was lowered. This is due mainly to the decline in non-food inflation, thanks to a reduction in the forecasts for tradables and controlled prices. Despite higher oil prices and interest rates, the outlook for the global economy over the short and medium term remains favorable. Expectations of growth in the world economy during 2004 are the highest in years. They are less optimistic for 2005, although the downward adjustment in growth should be moderate and consistent with historic growth rates particular to expansionary periods. Indicators of confidence, industrial production and available installed capacity in the United States suggest growth on the order of 4.3% in 2004 (Table 2). Nonetheless, the forecast for 2005 (3.5%) is less than last quarter, due to the possible impact of high oil prices.

# GROWTH FORECASTS (PERCENTAGES)

	Actual	Forecast on:						
	2003	October	r 6, 2004	July 6, 2004				
		2004	2005	2004	2005			
Developed Countries								
United States	3.0	4.3	3.5	4.7	3.8			
Euro Zone	0.5	1.6	2.4	1.6	2.4			
Japan	2.5	4.3	1.8	4.1	1.8			
Latin America								
Argentina	8.8	7.1	3.7	7.5	4.0			
Brazil	(0.2)	4.5	3.6	3.4	3.4			
Chile	3.3	5.1	4.9	5.0	5.0			
Mexico	1.3	4.0	3.7	3.8	3.6			
Peru	4.1	4.3	4.1	4.2	4.1			
Ecuador	2.6	5.5	3.3	4.9	3.9			
Venezuela	(7.6)	11.2	3.6	8.6	4.1			
Colombia	3.7	4.0	4.0	4.0	4.0			
Colombia's Major Trading	<u> </u>							
Partners	1.8	4.3	3.3	4.3	3.6			

Source: International Monetary Fund (IMF) and Datastream forecasts.

In spite of prospects for economic growth in the United States, the fiscal and current account deficits pose medium and long-term risks. According to the latest WEO report by the IMF, the forecast for the fiscal deficit in 2004 is 4.9%, with a slight drop in 2005 (4.3%). The forecasts in the last report were 4.8% and 3.5%, in that order. The current account deficit is forecast at 5.4% and 5.1% for 2004 and 2005, up from the last report (4.2% in 2004 and 4.1% in 2005).

A gradual increase of 50 bp in the Fed's rates is expected during the remainder of 2004 (a marginal adjustment of 25 bp with respect to the forecast in the last report). This is based on the current reference rate of 1.75%. The increase for 2005 would amount to 175 bp. Consequently, by the end of the year, nominal rates should be near long-term levels (4%). However, a possible decline in economic growth or in job market recovery could cause the Fed to be slower about changing its monetary policy.

Growth forecasts for the Euro zone remain moderate: 1.6% in 2004 and 2.4% in 2005, with no change in relation to the last quarter. According to the European Central Bank, exports from the zone should continue to benefit from added growth in the world economy, as well as higher investment, thanks to better terms for domestic financing, coupled with an improvement in private consumption. However, high oil prices are still a threat to growth, and persistent

At the end of 2005, the Fed's nominal interest rates will be near their long-term levels (4%).

Colombia's major trading partners, such as Ecuador and Venezuela, have seen better prospects for economic growth with the surge in oil prices. fiscal imbalances mean that most countries in the Euro zone probably will not meet the budget targets in their stability programs.

The outlook in Asia is led fundamentally by the Chinese economy, although policies adopted recently by the government of that country have yet to exert a visible impact on rising inflation. The economy in China is expected to grow by 8.9% in 2004 and 7.7% in 2005. As to Latin America, economic conditions are the best they have been since the period prior to the crisis of 1997-1998. High commodity prices, especially for oil, have bolstered growth in most countries, particularly Ecuador and Venezuela. Consequently, Colombia's trading partners are expected see economic growth at around 4.3%, as was predicted last quarter.

Higher commodity prices, anticipated low external interest rates over the short and medium term, and stability in inflation have lowered the market's perception of risk, making the emerging countries more attractive to international investors. This is reinforced by the prospect of a weak dollar against most currencies, which could mean a relatively significant flow of external capital into the emerging countries, including Colombia<sup>5</sup> (Table 3).

In this regard, Colombia's major trading partners, such as Ecuador and Venezuela, have seen better prospects for economic growth with the surge in oil prices. In Venezuela, the forecast is 11.2% for 2004. Although this exceeds the prediction three months ago, growth anticipated for 2005 has been adjusted down to 3.6% (Table 1). The economic growth forecast with respect to Ecuador is 5.5% for 2004, up from the previous quarter, but down for 2005 (3.3%). In this case, problems with implementing the structural reforms (hydrocarbons and social security) needed for more solid growth with more foreign investment and less dependence on the oil sector have heightened doubts about growth.

#### TABLE 3

## NET CAPITAL FLOWS - LATIN AMERICA (US\$ BILLIONS)

	2002	2003	2004	2005
Private net capital flows	1.4	0.0	(3.3)	14.2
Private direct investment	41.7	31.8	38.0	39.3
Private portfolio flows	(17.1)	(1.7)	(2.8)	3.0
Other private capital flows	(23.2)	(30.1)	(38.5)	(28.2)

Source: WEO

According to Latin American Consensus Forecasts for 2005, FDI in Colombia would be on the order of US\$2.2 billion (b), which is similar to 2004 (US\$2.1 b).

Relatively high commodity prices, especially for energy and metals, are expected to be a hallmark of the world economy over the medium term. This would mean favorable terms of trade for most emerging countries in the sub-region, including Colombia. According to the International Energy Agency (IEA), oil price forecasts rose to US\$40.98 a barrel in 2004 and US\$42.14 in 2005, as opposed to US\$36.9 and US\$37 predicted in the previous third quarter. This change is reflected in the assumptions on international commodity prices in the balance of payments (Table 4). However, high prices for raw materials could have repercussions on world inflation in excess of those estimated.

In this favorable scenario, the behavior of oil prices is the main risk. Their rise to record levels could eventually jeopardize expansion worldwide, with an adverse impact on export growth in the emerging countries and on the prices of other commodities. As an exporter of crude oil, Colombia would be affected less by this scenario, but it is unclear if more income from oil could offset these negative effects over the medium and long term, particularly if the country's export capacity continues to decline. Furthermore, to the extent that high oil prices are transferred to other prices, external interest rates could rise above those anticipated in this report, having a negative impact on capital flows and external lending terms for most emerging economies.

In this favorable scenario, the behavior of oil prices is the main risk. Their rise to record levels could eventually jeopardize expansion worldwide, with an adverse impact on export growth in the emerging countries and on the prices of other commodities.

#### TABLE 4

#### PRICES OF COLOMBIAN EXPORT PRODUCTS

	Average			Current projection		Previous projection 1/	
	2002	2003	2004	2005	2004	2005	
Oil (US\$/barrel)	24.20	29.00	38.16	41.91	34.14	32.11	
Coal (US\$/ton)	30.80	28.10	34.51	34.51	38.28	34.97	
Nickel (US\$/pound)	1.10	1.40	2.01	1.88	1.94	1.85	
Coffee (US\$/pound)	0.70	0.70	0.80	0.80	0.79	0.80	
Gold (US\$/troy ounce)	310.20	362.50	393.53	396.41	393.50	396.40	

<sup>1/</sup> Balance of payments estimated at July 2004

Source: WEO, assumptions applied to the balance of payments. Banco de la República, based on Colombia's main producers.

However, it is felt the effect of rising oil prices is still marginal and does not substantially change the outlook for growth worldwide.

The present report, however, continues to reflect the belief that the effect of rising oil prices is still marginal and does not substantially change the outlook for growth worldwide. In other words, Colombian exports would continue to be bolstered by high prices and growing external demand. The performance of markets in countries that depend largely on oil, such as Ecuador and Venezuela, is also important for Colombia.

The adverse impact real peso appreciation could have on non-traditional exports is expected to be offset by the pace of growth in markets for Colombian products, particularly Venezuela. The forecast for export growth in 2004 has been revised upward for this reason. As for 2005, non-traditional exports are not expected to increase as much, due to less average growth for our trading partners and the trends in exchange rates.

Moreover, the net capital inflows forecast in this report are higher than what was predicted three months ago. Given this fact, the assumed exchange appreciation used in the model applied to the balance of payments increased in 2004 to 7.7% (against 6.6% in the June report). Therefore, the current account deficit in 2004, as a share of GDP, would be 1.4% and would increase in 2005.

In the international context, a second risk concerns the huge trade and fiscal deficits in the United States and the high level of household borrowing in that country. Sooner or later, the solution to these problems will demand an adjustment in spending levels and higher international interest rates, affecting U.S. economic growth and that of the global economy.

Yet, many emerging economies are now less vulnerable to international interest rate hikes than decade ago. Their macroeconomic fundamentals are better and they have less external debt and a more solid financial position than in past years. On average, the emerging countries now have a lower (higher) current account deficit (surplus), which makes them less dependent on external financing. This reduced exposure to foreign borrowing has lessened their vulnerability to fluctuations in the markets, making their investment instruments more attractive to foreign investors.

It is important to point out, however, that the Colombian economy may be more susceptible than others in Latin America to changes in capital market conditions. Its current account deficits are the highest in the region, it is more dependent on outside resources (particularly the central government), and recent years have seen an increase in its public debt.

In the international context, a second risk concerns the huge trade and fiscal deficits in the United States and the high level of household borrowing in that country.

#### B. DOMESTIC DEMAND AND ECONOMIC GROWTH

A number of elements will continue to favor growth during remainder of the year and at the start of 2005, namely:

- Business and consumer expectations as to how the economy will perform.
- Low interest rates and broad liquidity in the economy
- More business and consumer willingness to borrow and a recovery in disposable income, thanks to rising employment and better terms of trade
- The increase in business profits for 2004, which could stimulate investment next year.

On the other hand, 2005 could witness negative risks, such as:

- The impact of an eventual tax reform on disposable household income
- The effect of current and anticipated exchange appreciation on export sectors or those that compete with imports
- Government dependence on external financing, in the event of mobility in the capital markets
- A further rise in fuel prices and transportation rates, which could increase production costs and lower the potential for growth

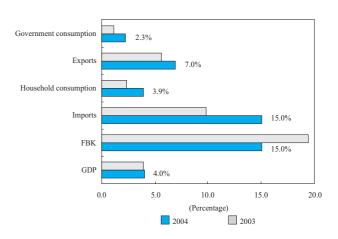
The expectation in this report is that the economy will continue to grow during the remainder of the year and in 2005 at a rate similar to that observed during

the last four quarters. Specifically, the Bank expects 4.0% growth in 2004. Exports will continue to be a source of expansion during the remainder of 2004, favored by world growth and private investment (Graph 43). The latter should perform well this year, thanks to investments in construction indicated by the results of the DANE home construction census (Table 5) and investments in machinery and equipment, as anticipated by the recent growth in imports of capital goods.

The expectation in this report is that the economy will continue to grow during the remainder of the year and in 2005 at a rate similar to that observed during the last four quarters.

GRAPH 43

#### SPENDING-SIDE REAL GDP GROWTH



FSource: DANE. Banco de la República calculations

FINDINGS OF THE CONSTRUCTION CENSUS: JUNE 2004 (PERCENTAGE)

	C	Completed Works		Ongoing Works				alyzed or Inactive	e Works
		WOLKS	New	Remain Ongoing	Reinitiated	Total Ongoing	New	Still Paralyzed	Total Paralyzed
2001	I	9.0	61.4	1.0	168.5	9.3	(33.0)	(8.4)	(11.3)
	II	41.0	12.7	5.5	(71.9)	0.5	13.3	(7.7)	(4.9)
	III	11.5	(11.7)	2.5	(33.3)	(3.4)	(10.4)	0.4	(1.0)
	IV	28.6	27.3	(10.6)	60.7	(0.1)	(27.7)	(2.3)	(5.2)
2002	I	23.0	58.9	2.4	(67.1)	15.5	19.1	(0.9)	0.8
	II	4.6	77.0	29.7	49.4	40.3	(27.3)	(0.7)	(5.0)
	III	48.5	92.3	29.8	2.4	44.4	(42.6)	(8.3)	(12.3)
	IV	13.5	75.4	47.8	(11.9)	52.7	(0.6)	(12.8)	(11.8)
2003	I	24.4	11.9	51.5	(25.8)	36.1	(20.5)	(9.6)	(10.7)
	II	27.5	17.9	29.9	44.0	27.0	(25.2)	(14.6)	(15.9)
	III	5.0	30.9	36.1	4.5	33.5	33.8	(13.1)	(9.5)
	IV	5.5	17.7	47.5	7.8	36.8	(2.2)	(11.0)	(10.2)
2004	I	55.1	35.6	29.6	81.8	32.2	6.4	(16.7)	(14.6)
	II	11.9	50.0	37.1	(32.7)	38.4	32.3	(14.8)	(9.7)

Source: DANE. Banco de la República calculations

Growth rates in consumption will be similar to those in the first half of the year, thanks the expected rise in disposable income, which will expand in excess of GDP for the first time in several years. Another factor is the stability in consumer expectations regarding the economic outlook.

Growth in the second half of the year will continue to be bolstered by private construction and industry, among other sectors (Table 6). In real terms, the Bank expects expansion in the Colombian economy to ease somewhat. This is explained almost entirely by statistical factors: fewer working days compared with the third quarter of the year, a slowdown in the mining sector due to coal and oil production, and stabilization in the home-building sector, which is expected to see 27.6% annual growth in 2004. A drop of 11% for the year in construction of civil works is projected as well.

For 2005, external and domestic analysts expect 4.0% growth, on average<sup>6</sup>, with consumption and private investment being the most dynamic components of demand. Exports will not contribute as much, because of less growth in the non-traditional sector. Current real appreciation and the estimate for 2005 also will reduce growth in the sectors that compete with imports.

For 2005, foreign and domestic analysts expect 4.0% growth, on average, with consumption and private investment being the most dynamic components of demand.

<sup>6</sup> Latin American Consensus Forecast, October 2004.

# PROJECTED ANNUAL GDP GROWTH BY SECTOR (ANNUAL PERCENTAGE CHANGES IN 1994 PESOS)

Sectors	2004				
	I (pr)	II (pr)	III (proj)	IV (proj)	(proj)
Agriculture. forestry, hunting and fishing	3.3	2.7	3.2	3.6	3.2
Mining and quarrying	6.0	3.6	(0.7)	(4.2)	1.1
Electricity. gas and water	4.5	3.4	2.9	3.5	3.6
Industrial manufacturing	4.1	6.3	4.5	5.0	5.0
Construction	11.3	9.3	19.7	9.8	12.5
Building	54.0	29.4	25.0	9.3	27.6
Civil works	(41.6)	(22.0)	11.1	10.8	(11.0)
Commerce. repairs. restaurants and hotels	5.4	5.4	5.1	5.5	5.4
Transport. storage and communications Financial institutions, insurance, real estate	6.1	4.1	2.9	7.7	5.2
and business services	7.3	(1.4)	3.8	3.8	3.3
Social. community and personal services	2.1	2.1	2.6	2.5	2.3
Brokerage and financial services					
measured indirectly	28.7	(19.9)	9.3	9.3	6.4
Subtotal: value added	3.9	4.2	3.9	3.9	4.0
Gross domestic product	4.0	4.3	3.9	3.9	4.0

(pr) Preliminary (proj) Projected

Source: DANE preliminary projections and Banco de la República calculations

### C. Inflation Forecasts

#### 1. Forecasts for the End of 2004

The following are the forecasts originating with the different satellite models applied by the Bank for inflation, growth, the output gap and devaluation, condensed in the short-term forecast (STF). For the purpose of this report, the fourth quarter of 2004 and the first quarter of 2005 were regarded as the short-term horizon with respect to inflation forecasts. The total and non-food inflation forecasts for the third and fourth quarters of 2004 were adjusted up in the last report (June), given the rise in international fuel prices and the anticipated impact this would have on the domestic price of gasoline and transportation rates.

Although the last three months have seen domestic price changes for these items, they tended to be less than expected, even though the international price of oil kept climbing. In some cases, the authorities responsible for price controls may have postponed some of the readjustments until next year.

As noted in Chapter I, certain controlled rates for public utilities, specifically water, were lowered in August following a new ruling that reduced (eliminated) certain components of the rate charged to end consumers. The price reductions originating with this new ruling were underestimated in the June report.

Both these circumstances; that is, lower increases in fuel and transportation prices and reduced water rates, are the reason for the overestimate of non-food

Although the last three months have seen changes in the prices of controlled items, they tended to be less than expected.

The projection for nonfood inflation at the end of 2004 is lower in the present report. On this occasion, annual inflation in this subbasket of goods and services is expected to be 5.4% inflation in the STF in the last report. On that occasion, the STF for annual non-food inflation was 5.9% as opposed to the actual 5.4%.

Considering these forecast errors, the projection for non-food inflation at the end of 2004 is lower in the present report. On this occasion, annual inflation in this sub-basket of goods and services is expected to be 5.4% (as opposed to 6.1% in the June report). Accordingly, non-food inflation would end the year slightly below the mid-point of the target range set by the BDBR for 2004.

In the first quarter of 2005, however, the STF points to a slight rise in non-food inflation to annual levels near 5.7%. This is due to surges in controlled-price inflation anticipated at the start of the year, especially the hikes in public transportation rates that were postponed in 2004.

Excluding controlled prices (fuel, transportation and public utilities), inflation for all other items, without food, is not expected to change much between the June report and this one. A slight additional drop in tradables inflation is still expected. This would be in keeping with the stronger peso and a small rise in non-tradables inflation, mainly because of gradual closure of the output gap and a recovery in the relative price of rentals.

As to food inflation, the rate in September was slightly above the forecast published in the June report. This was because of higher prices for perishables, partly due to the trucking strike of the previous month, but also because of higher price hikes for certain imported non-perishables. Accordingly, the STF for food inflation at December is slightly higher in this report: 6.6% as opposed to 6.1% in the June report. For the third quarter of 2005, the satellite models applied by the Bank forecast lower prices for perishables in response to the relatively high prices in the second half of this year. This means annual food inflation could drop to 5.1% towards March.

Accordingly, the STF for total consumer inflation at December 2004 is 5.8%, which is well below the forecast published the last quarterly report. This is largely because of the decline in non-food inflation, thanks to lower forecasts for controlled-price and tradables inflation, the latter as a result of more exchange appreciation.

In addition to inflation, the STF includes GDP projections for the second half of 2004. As explained in the previous section, annual GDP growth is expected to average 3.9% this period, which would mean 4% GDP growth for the year as a whole. The lower rate anticipated for the second half of 2004, compared with the first six months (4.2%), obeys statistical phenomena that are associated with a high base of comparison in the case of mining GDP and fewer working days (a temporary phenomenon). Consequently, this is not considered a loss of momentum in the economy.

A slight additional drop in tradables inflation is still expected. This would be in keeping with the stronger peso and a small rise in nontradables inflation due to gradual closure of the output gap.

With this growth assumption, the output gap applied in the STF predicted by the Bank's central model would average -1.55% during the second half of the year. This is no significant change from the assumptions and results shown by the central model in its September estimate. Accordingly, the gap will have closed in 2004 by 0.3 pp. Actual GDP will remain below its potential or non-inflationary level this year, which means demand pressures on prices would be moderate, but increasing.

Finally, the expectation is that external conditions will continue to impel exchange appreciation, and these pressures might be more pronounced and prolonged than was foreseen in the previous report. This situation probably will not change much over the medium term, as the Fed is expected to raise interest rates gradually and the external and fiscal deficits the U.S. economy will remain a factor throughout 2005.

The output gap applied in the STF predicted by the Bank's central model would average - 1.55%

The expectation is that external conditions will continue to impel exchange appreciation, and these pressures might be more pronounced and prolonged than was foreseen in the previous report.

#### 2. Long-term Forecasts

The forecasts obtained with the transmission mechanisms model (TMM) applied by the Bank are described in this section. As is customary, this exercise was based on the STF for inflation, the output gap and other variables at December 2004 and March 2005. The TTM shows a trend in interest rates that is coherent with the inflation target set by the Board of Directors for this year (between 5% and 6%) and those announced for subsequent years (between 3.5% and 5.5% for 2005 and a long-term target of 3%).

The present report indicates no fundamental changes in the long-term outlook for inflation compared with the last two quarterly reports. Inflation over the medium and long term will continue to be associated with two opposite forces. One is low or even falling inflation in tradable goods and services, reflecting

the pressure exerted to date by accumulated appreciation, which could continue in the coming quarters. The other is rising inflation for non-tradables, given the recovery in demand and gradual closure of gap in output.

The main difference between the forecasts and the inflation trends in this and previous reports concerns the role of the exchange rate, given recent appreciation, which is higher than foreseen in the June report.

The main difference between the forecasts and the inflation trends in this and previous reports concerns the role of the exchange rate, given recent appreciation, which is higher than foreseen in the June report. Also appreciation in the coming quarters is likely to increase more than what was anticipated in June.

On the whole, these circumstances signal better performance for tradables inflation in 2005. In this report, the expectation is that tradables inflation during 2005 will remain below the target, as is now the case, and even could drop below the levels seen in September.

With respect to the output gap, gradual closure in response to current economic growth is expected to continue. The brisk momentum of investments during the course of 2004 and projections for the rest of the year would allow for significant growth in potential or non-inflationary output. Nevertheless, it is important to remember that gradual closure of the output gap, even if negative, leads to higher core inflation (or at least with respect to the non-tradable component of the consumer price index), provided there is no drop in inflationary expectations or in inflationary inertia to compensate for this growth.

In this sense, expectations could play a more favorable role than anticipated in earlier reports, since the high probability of meeting the 2004 target is likely to lower inflationary expectations at the start of 2005, helping to reduce inflation during that year.

The forecasts in the basic scenario (Table 7) do not contemplate shocks from an increase in the valued-added tax rate (VAT) or the possible occurrence of El Niño in 2005, which would have a negative impact on agriculture. Also, the assumed increase of 6% in public utility rates is below the projection for 2004. However, the basic scenario does include adjustments in domestic fuel prices. These exceed the target and are consistent with the expected rise in international oil prices. A shock originating with higher public transportation rates for 2005 is also part of the equation.

In this context, the TMM suggests that interest rates would have to increase in the near future if the Bank's long-range targets are to be met. Compared with the forecast in June, the changes in interest rates as a result of the model are far more moderate. This is associated with the actual and expected rise in appreciation, and less inflation predicted for the end of this year, particularly

The forecasts in the basic scenario do not contemplate shocks from an increase in the valued-added tax rate (VAT) or the possible occurrence of El Niño in 2005.

# INFLATION FORECASTS IN THE BASIC SCENARIO (PERCENTAGE)

	Total Inflation	Non-food Inflation	Food Inflation	Output Gap	TDC (average)
March. 2004	6.3	6.1	6.7	(1.7)	7.8
June. 2004	6.1	5.9	6.5	(1.7)	7.7
September, 2004	6.0	5.4	7.2	(1.6)	7.7
December. 2004	5.8	5.4	6.6	(1.5)	8.1
March. 2005	5.5	5.7	5.1	(1.4)	8.8
June. 2005	5.2	5.5	4.5	(1.3)	8.9
September. 2005	4.9	5.3	3.9	(1.4)	9.1
December. 2005	4.6	5.1	3.4	(1.4)	9.3
March. 2006	4.8	4.8	4.8	(1.3)	9.4
June. 2006	4.8	4.7	5.0	(1.2)	9.6
September, 2006	4.6	4.6	4.6	(1.1)	9.8
December, 2006	4.5	4.5	4.5	(1.1)	9.9

Source: DANE, Banco de la República

with respect to core inflation. In the model, these factors also favorably affect inflationary expectations for 2005.

Moreover, according to the TMM, rates should rise in the medium term. This is consistent with the inflation reports presented throughout the year. One factor that explains this trend in interest rates is the shift towards a neutral monetary-policy position (based on historic minimum levels), insofar as the increase in domestic growth tends to close the output gap and the rate of inflation is still above the long-range target (3%).

The need for higher rate changes would vary in alternative scenarios that contemplate either the possibility of quicker economic growth, which would be reflected in an output gap that is closing faster, or increased exchange appreciation in 2005. If the latter occurs, and depending on the extent of appreciation, rates would not have to increase this year and the rise in 2005 would be less.

#### 3. Risk Balance

The following sources of risk to the forecast for total inflation over the next two years were identified in calculating the risk balance.

Consumption and investment in 2004 could grow more than predicted in the central scenario. As a result, the output gap could close faster than expected. The bias in 2005 would be towards a broader output gap,

According to the TMM, rates should rise in the medium term, which is consistent with the inflation reports presented throughout the year.

The probability of total inflation being less or equal to 5.5% in 2005 has increased compared with the last report.

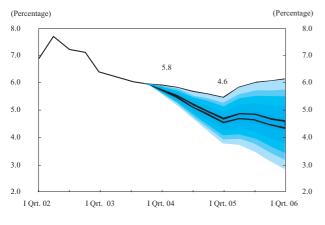
because of a possible slowdown in exports and the potential increase in GDP due to more investment this year.

- As suggested by some of the Bank's forecast models, food inflation could be higher than predicted in the basic scenario. Also, meteorological authorities in the United States say the presence of El Niño is a possibility.
- Price hikes for controlled goods and services beyond expectations, as well as a possible increase in VAT rates and a broader base for this tax, would mean higher non-food inflation than the prediction in the general scenario.
- Larger capital inflows and better international prices for exports could bring more pressure to bear on exchange appreciation than is contemplated in the basic scenario.

The probability distribution table (fan chart or confidence interval) (Graph 44) shows the risk balance. The distribution of probabilities for total inflation indicates a 99% chance of it being below 6.0% in 2004. This is a significant increase with respect to the last report (49%). Also, the probability of total inflation being less or equal to 5.5% in 2005 has increased compared with the last report (96% verses 88%). The fan chart shows a balanced confidence interval for the central path of the inflation forecast.

#### GRAPH 44

# INFLATION PROBABILITY DISTRIBUTION (FAN CHART)



Inflation	2004		2005				)6
Rangers (%)	Dec.	Mar.	Jun.	Sep.	Dec.	Mar.	Jun.
[6.0-6.5]	0.9	0.9	0.3	0.4	0.3	2.4	3.9
[5.5-6.0]	98.5	52.9	13.6	7.2	3.8	10.1	11.2
[5.0-5.5]	0.6	45.6	56.9	34.1	18.5	23.7	21.0
[4.5-5.0]	0.0	0.5	27.7	42.8	36.4	30.7	25.9
[4.0-4.5]	0.0	0.0	1.4	14.3	29.6	22.0	21.0
[< 4.0]	0.0	0.0	0.0	1.3	11.3	10.8	15.9

Source: DANE. Banco de la República calculations.

# IS THERE A CONNECTION BETWEEN EMBI MOVEMENT AND THE EXCHANGE RATE IN LATIN AMERICAN ECONOMIES?

Variation in the EMBI levels (country-risk premium (spreads) of the different economies is normally associated with their degree of solvency and external liquidity, and their fiscal situation or economic growth, among other variables<sup>1</sup>. Emerging economies are exposed to ordinary shocks associated with terms of trade or changes in the portfolios of international investors, as well as specific shocks that can infect other economies through the movement of external capital flows. These factors usually show up in global movements of the EMBI.

Graph B2.1 suggests there is a direct connection between the movements of Latin American country-risk premiums, not only during times of market tension, but also when the markets are calm<sup>2</sup>. Something similar happens with movement in the currencies of emerging economies, given the parity characterizing financial markets with free mobility (Graph B2.2).

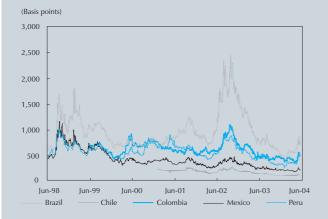
Graph B2.1 shows the accumulated frequencies associated with contemporary correlations (in 30-day moving windows) between the country-risk premiums of Colombia, Peru, Chile and Mexico and that of Brazil, which can be a source of major shocks, given its economic importance. These shocks tend to propagate towards the other economies in the region. In almost 70% of the cases, with the exception of Chile, the 30-day correlation is 0.4 or more. In the case of Chile, only 8% of the observations are within this range. This suggests Chile would be relatively more capable than others in the region of isolating itself from shocks to the Brazilian EMBI.

GRAPH B2.1

EMBI+

EMBI+ SEVERAL LATIN AMERICAN COUNTRIES
BRAZIL, CHILE, COLOMBIA, PERU AND MEXICO







Source: Bloomberg. Banco de la República calculations.

Source: Bloomberg. Banco de la República calculations.

See, for example, "International Capital Markets: Emerging Market Financing," IMF, August 2001.

Forbes and Rigobon, "Contagion in Latin America: Definitions, Measurement, and Policy Implications," IMF-World Bank, August 2000.

TABLE B2.1
ACCUMULATED RELATIVE FREQUENCY OF CORRELATION IN COUNTRY-RISK PREMIUMS (\*)

Accumulated Range of the Correlation	Percentage						
Coefficient	Colombia / Brazil	Peru / Brazil	Chile / Brazil	Mexico / Brazil			
0.9 1	0.4	0.3	0.0	0.0			
0.8 1	5.8	3.9	0.0	10.5			
0.7 1	18.3	16.7	0.0	23.0			
0.6 1	39.5	39.4	0.0	37.3			
0.4 1	67.2	74.0	8.0	66.7			
0.2 1	87.9	88.6	29.7	85.1			
0.0 1	98.0	96.7	68.3	95.4			
(0.2) 1	100.0	99.4	92.9	100.0			
(0.4) 1		100.0	97.7				
(0.6) 1			100.0				

<sup>(\*)</sup> Correlation between country-risk premiums in differences (30-day moving average). Source: Bloomberg. Banco de la República calculations.

The country-risk premiums of these nations are correlated by levels and by the relative magnitude of the change. As shown in Table B2.2, for more than 60% of the cases in Colombia, Chile and Mexico (30% for Peru), the correlation coefficient between the percentage variations (30-day moving average) in the EMBI and the variations in Brazil's country risk is 0.6 or more.

Table B2.2
Accumulated Frequency of Correlation between Changes in Country-risk Premiums (\*)

Accumulated Range of the Correlation Coefficient	Percentage						
	Colombia / Brazil	Peru / Brazil	Chile / Brazil	Mexico / Brazil			
0.9 1	17.0	4.0	21.0	13.0			
0.8 1	35.0	13.0	39.0	36.0			
0.7 1	47.0	23.0	52.0	51.0			
0.6 1	60.0	31.0	63.0	62.0			
0.4 1	77.0	51.0	76.0	76.0			
0.2 1	87.0	66.0	85.0	85.0			
0.0 1	93.0	78.0	92.0	93.0			
(0.2) 1	96.0	90.0	96.0	97.0			
(0.4) 1	97.0	96.0	98.0	100.0			
(0.6) 1	98.0	99.0	100.0				
(1) 1	100.0	100.0					

<sup>(\*)</sup> Moving coefficient (30-day) on monthly variations in country-risk premiums. Source: Bloomberg. Banco de la República calculations.

Additionally, the correlation between the Latin American economies is particularly high during periods of relatively larger variations, whether up or down. For example, with a positive or negative variation of more than 50% in the EMBI for Colombia, its correlation coefficient with Brazil is 0.76 on average (Table B2.3). For Peru and Mexico, the correlation is even higher (0.87 and 0.88, respectively), while the coefficient for Chile is, again, virtually zero (-0.01).

A similar exercise applied to each country's currency shows the correlation coefficients between the exchange rates in Colombia, Peru, Chile and Mexico and that of Brazil are less than those for the country-risk premiums. This probably means that exchange movement over the short term incorporates more of the impact of a country's

TABLE B2.3 CORRELATION COEFFICIENTS BETWEEN COUNTRY-RISK PREMIUMS, BY VARIATION RANGES

Percentage	Correlation Coefficient (Average) 2/						
Changes in the Country-risk Premium 1/	Colombia / Brazil	Peru / Brazil	Chile / Brazil	Mexico / Brazil			
10.0	0.49	0.56	0.08	0.66			
15.0	0.49	0.59	0.09	0.70			
20.0	0.50	0.65	0.09	0.77			
25.0	0.53	0.71	0.06	0.81			
30.0	0.58	0.77	-0.01	0.83			
35.0	0.63	0.81	-0.13	0.86			
40.0	0.64	0.85	-0.13	0.88			
45.0	0.59	0.86	-0.08	0.88			
50.0	0.76	0.87	-0.01	0.88			
55.0	0.76	0.88	0.06	0.89			

internal factors. However, during times of considerable EMBI movement (upward or downward), the exchange rates of these countries tend to be more correlated. So, when the Colombian EMBI varies by more than 40%, the correlation coefficient between the Colombian and Brazilian exchange rates is on the of order of 0.29 (Table B2.4).

The foregoing suggests that EMBI movement over time would be affected to an important degree by contagion factors or by the shocks common to emerging economies. Several reasons support this hypothesis. For one, these economies are often exporters of commodities, the prices of which tend to move in a similar way. They also are highly dependent on external resources and their currencies are not internationally liquid. Moreover, they do not have deep financial markets and their commercial ties with the developed economies, and even amongst themselves, help to propagate external shocks.

CUADRO B2.4 CORRELATION COEFFICIENT BETWEEN EXCHANGE RATES BY VARIATION RANGE IN COUNTRY-RISK PREMIUMS

Percentage	Correlation Coefficient (Average)					
Changes in the Country-risk Premium (*)	Colombia / Brazil	Peru / Brazil Chile / Braz		Mexico / Brazil		
10.0	0.06	0.15	0.44	0.18		
15.0	0.04	0.16	0.44	0.18		
20.0	0.07	0.19	0.45	0.17		
25.0	0.16	0.21	0.44	0.17		
30.0	0.21	0.16	0.45	0.16		
35.0	0.28	0.18	0.49	0.13		
40.0	0.29	0.17	0.48	0.10		
45.0	0.22	0.15	0.36	0.10		
50.0	0.63	0.15	0.15	0.11		
55.0	0.63	0.13	-0.01	0.09		

(\*) The changes indicate spread reductions as well as increases. Source: Bloomberg. Banco de la República calculations.

<sup>1/</sup> The changes indicate spread reductions as well as increases. 2/ Correlation coefficients associated with these changes. Source: Bloomberg. Banco de la República calculations..

# PROJECTIONS BY DOMESTIC AND EXTERNAL ANALYSTS FOR SEVERAL MACROECONOMIC VARIABLES

The following is an analysis of the latest projections on the main variables of the Colombian economy for late 2004 and 2005, developed by a group of domestic and external analysts using information available at September.

#### I. Projections for the End of 2004

The forecasts for 2004 are shown in Table A1. Domestic analysts predict 3.9% growth; external analyst, 4.1%. These are similar to the forecasts last quarter. Five of the nine analysts did not change their forecasts. Three raised theirs and only IDEA lowered its forecast for the end of 2004, in this case by 40 bp. IDEA is the most optimistic, with a prediction of 4.4% growth (down from 4.8% last quarter). ANIF and *Dinero* are the most pessimistic, with 3.8% (opposed to 3.6% last quarter). There is less deviation in the forecasts, which is to be expected as the year draws to a close, and suggests a consensus on the year-end figure at around 4%. As to inflation, the forecast is still 5.9%, slightly down from the earlier prediction (6.6%). Eight of the nine analysts are confident the inflation target will be met, although somewhere at the upper end of the range set by the Bank at the start of the year. Goldman Sachs made the highest prediction of inflation (6.1% against 6.4% last quarter), while Suvalor is the most confident. It believes inflation will be in the middle of the target range (5.5%).

TABLE A1
PROJECTIONS ON THE PRINCIPAL MACROECONOMIC VARIABLES FOR 2004

	Real GDP Growth	CPI Inflation	Nominal Exchange	Nominal DTF	De (% of	ficit GDP)	Unemploymen Rate
	%	%	Rate (end of)	1/ %	Fiscal (CPS)	Current Acct.	- (13 cities) %
Domestic Annalysts							
Revista Dinero	3.8	6.0	2,680	7.8	2.8	n.a.	13.0
Suvalor-Corfinsura	4.0	5.5	2,650	7.9	2.5	1.9	12.5
Corfivalle	4.0	5.8	2,700	7.7	2.5	1.7	14.5
ANIF	3.8	6.0	2,640	7.8	2.8	n.a.	13.0
Fedesarrollo	3.9	6.0	2,738	7.9	2.7	1.9	13.5
Average	3.9	5.9	2,682	7.8	2.7	1.8	13.3
External Analysts							
Goldman Sachs	4.0	6.1	2,620	7.9	2.5	1.4	13.3
IDEA Global	4.4	5.7	2,670	7.9	2.4	0.9	13.5
J. P. Morgan Chase	4.0	5.8	n.a.	7.8	2.5	1.9	15.0
Deutsche Bank	4.0	5.8	2,650	7.5	2.5	1.6	13.0
Average	4.1	5.9	2,647	7.8	2.5	1.5	13.7

SPC: Consolidated public sector.

n.a. Not available

1/ Yearly average.

Source: Analysts, Report "¿Cómo nos ven afuera?, SMT Sept 2004. Consensus Forecast and Dinero.

The analysts expect the exchange rate to be between Col\$2,620 and Col\$2,738 by the end of the year. The difference between the average prediction by domestic and external analysts is Col\$35 (as opposed to Col\$5 last quarter). Seven analysts sharply cut their forecasts, Fedearrollo made no change in its and, for J.P. Morgan, there is no new information. The domestic analysts lowered their predictions by Col\$92, on average; the external analysts cut theirs by Col\$122 (lead by Goldman Sachs, which made a downward adjustment of Col\$260). Despite recent jumps in the market, the deviation in forecasts declined to Col\$118, having been Col\$180 last quarter.

The average forecast for the DTF is 7.8% (following 8.1% last quarter). Again, this denotes stability in the current level. Four of the nine analysts lowered their forecasts, two raised theirs and two made no change (there was no information from Goldman Sachs last quarter). Corfivalle modified its forecast to 7.7%, after having predicted 8.9% last quarter. By the end of the year, the fiscal deficit is expected to be 2.6% of GDP, on average, and the projections are almost the same has they were three months ago, although three of the nine analysts lowered them slightly.

The domestic analysts made virtually no changes in their predictions on the current account deficit. As for the external analysts, average remained much the same, with two analysts making an upward adjustment and two revising down. Goldman Sachs lowered its prediction from 2.2% to 1.4%, while IDEA changes its 0.3% to 0.9%. Unemployment in the 13 major cities is expected to average 13.5% (down 0.5% from last quarter). Three analysts lowered their forecasts, two raised theirs, and another two made no change (a quarter ago, there were no figures from Suvalor). The domestic analysts dropped their forecast by 70 bp from last quarter (when they adjusted downward by 20 bp from the quarter before) and the external analysts did so by 17 bp (following an increase of 40 bp the quarter before). *Dinero* lowered its predictions by 1.8% and Deutsche Bank by 1.6%, suggesting that good performance of the economy in terms of jobs took them by surprise. J.P. Morgan is the most pessimistic, forecasting 15%, while Suvalor is the most optimistic. It expects 12.5% unemployment.

#### II. Projections for 2005

Several forecasts for 2005 are listed in Table A2. The analysts anticipate 3.9% average growth compared with the 4% prediction last quarter. While Goldman Sachs and Suvalor expect 3.5% growth, IDEA forecasts 4.5% (down from 5% a quarter ago). As to inflation, the domestic analysts are predicting 5.4% and the external analysts, 5.1%.

Six of the nine analysts lowered their inflation forecasts. The \$320 adjustment by Goldman Sachs and the \$218 adjustment by the Deutche Bank are particularly striking and indicate a dramatic change in their expectations for the exchange rate during 2005. The change anticipated by the domestic analysts averages \$69 more than the exchange rate predicted by the external analysts (it was \$64 less a quarter ago). The domestic analysts revised their forecasts by \$67. This implies an implicit devaluation of 5.6% against 4.2% anticipated a quarter ago and 10% compared with their predictions two quarters ago. The external analysts lowered their expectations by \$190. This translates into 4.4% average implicit devaluation as opposed to 6.5% predicted a quarter ago and 4% two quarters ago.

TABLE A2 PROJECTIONS FOR THE PRINCIPAL MACROECONOMIC
VARIABLES IN 2005

	Ral GDP Growth %	CPI Inflation %	Nomial Exchange Rate (end of)
Domestic Annalysts			
Revista <i>Dinero</i>	3.8	5.5	2,868
Suvalor-Corfinsura	3.5	5.4	2,820
Corfivalle	4.0	5.5	2,814
ANIF	3.8	5.5	2,770
Fedesarrollo	4.1	5.0	2,890
Average	3.8	5.4	2,832
External Analysts			
Goldman Śachs	3.5	5.0	2,730
IDEA global	4.5	5.0	2,770
J, P, Morgan Chase	4.0	5.0	n.a.
Deutsche Bank	3.9	5.2	2,790
Average	4.0	5.1	2,763

n.a. Not available. Source: Analysts, Report "¿Cómo nos ven afuera?, SMT Sept 2004. Consensus Forecast and *Dinero*.

# MONETARY POLICY DECISIONS IN THE LAST THREE MONTHS

#### **Background Information: Inflation Report - June 2004**

The June edition of the *Inflation Report* confirmed two trends that were mentioned in earlier reports. One is good momentum in the world economy and favorable conditions for emerging economies on the capital markets. The other is consolidation of the recovery in domestic demand. The latter was associated with factors such as the improvement in the employment rate and the quality of jobs, the rise in disposable income, and low real interest rates. As a whole, these factors reflect good economic growth and continuation of the trend towards exchange appreciation.

In this context, the report showed that non-food inflation remained slightly below 6.0% during the second quarter, propelled by two opposite tendencies: the reduction in core inflation prompted by the downturn in tradables inflation, and the rise in non-tradables inflation. The latter was due mainly to the increase in rental inflation.

According to the June report, inflationary pressures spurred by demand were probably contained during the first half of 2004, when the indicators continued to denote surplus productive capacity. The existence of cost-pushed and wage-pushed inflationary pressures was ruled out, except in certain sectors. As to inflationary expectations, although there was no sign of an increase, neither did they appear to be falling below levels around 6.0%.

The inflation forecast update assumed an increase in nominal peso appreciation during 2004 (6.7%, on average, for 2004 versus 6.0% in the March report), and a similar output gap (-1.6% versus -1.5%, on average, for 2004). The report also mentioned the possibility that larger-than-expected shocks originating with the prices for food and controlled items could have a negative impact on the course of these expectations. Given these possible shocks, the forecast in the June report was increased to 6.0% for total inflation in 2004 and 6.1% for non-food inflation.

The results of the central forecast model pointed to a gradual rise in interest rates (DTF) from the fourth quarter of 2004 until 2006, so as to met increasingly lower inflation targets and to converge at around 3.0% over the long term.

An assessment of risk factors showed that further appreciation in 2004 was likely, as was more depreciation in 2005, compared with the assumptions in the basic scenario. In this same scenario, the assumption was that food inflation would converge with non-food inflation by the end of 2005 (5.0%); it did not contemplate the effect of a possible change in VAT that year. With this risk balance, inflation is less likely to be under 6.0% at the end of 2004 and somewhat more likely to be less than 5.5% in 2005.

This being the case, and with the prospect of possibly more appreciation in 2004, the Executive Board made no change in interest rates during the quarter. At the same time, given the possibility of further peso depreciation during 2005, the Bank decided to intervene in the exchange market through auctions to accumulate US\$850 million (m) in

foreign currency between April and July; US\$600 m of these options were exercised. From a monetary standpoint, this operation was handled in a way that provoked no unwanted changes in the Bank's interest rates.

#### Monetary Policy Decisions in the Third Quarter of 2004

As indicated in Chapter I of this report, external and domestic conditions for growth of the Colombian economy remained favorable throughout the third quarter. The peso continued to appreciate, particularly in July and August when the rate of exchange reached Col\$2,551.4 per dollar<sup>1</sup>.

Compared with the June report, the main differences deal with the existence of fewer supply shocks in 2004 from controlled goods and services, and a lower exchange rate forecast for 2004 (-7-7% depreciation versus -6.6% in the June report) and for 2005. The non-food inflation forecast for December 2005 does not change much (5.1% versus 5.0% in the June report). However, the prediction for food inflation that year is far lower (3.4% versus 4.9%), which also pulls down the total inflation forecast for 2005.

This being the case, the path of short-term interest rates (90 days) consistent with the downturn in long-range inflation targets is lower than in the last report, according to the central forecast model. The reason for the upward trend in interest rates during the coming quarters is understandable, as closure of the output gap creates pressure for higher inflation. Under these conditions, because the path of inflation targets is declining, interest rates must increase to meet these targets, if there is no sufficiently large compensatory movement in inflationary expectations, in inflationary inertia or in tradables inflation.

Although the expectation is that tradables inflation will continue to be less than total inflation and less than the target to be set for 2005, this alone does not offset inflationary expectations and inflationary inertia itself, which continue to exceed the targets for the future. A sharper drop in inflationary expectations would modify the necessary scope of the adjustment in interest rates. However, there is no evidence in Chapter I that inflationary expectations have declined to any great degree, and some indicators even show persistence at levels of 6.0%, which clearly exceed the range announced for defining the target in 2005 (from 3.5% to 5.5%).

It is important that monetary authorities keep a close watch on inflationary expectations, particularly in terms of how they might respond to the inflation target announced for 2005. On the other hand, the shocks that can occur with certain controlled prices and services must be kept in mind, along with the possibility of El Niño in 2005, all of which could mean substantial inflationary pressure and would affect inflationary expectations, although only temporarily.

In addition, monetary policy must make sure the current output gap closes at a rate that causes no quick hikes in the price of tradable goods. It is particularly important to minimize the likelihood of a positive gap in a context of real appreciation, in which case the full weight of deinflation would fall on the exchange rate, with subsequent costs for economic activity in the tradable sectors.

As to policy instruments, the foregoing means it is important not to keep real interest rates too low for a prolonged period of time, in order to curb closure of the output gap. At some point, the Bank's intervention rates will have to

<sup>&</sup>lt;sup>1</sup> The representative market exchange rate (TRM) at August 31, 2004.

be increased and the decision on when to do so must consider the lags in monetary policy. If monetary policy reacts only when accelerated closure of the output gap is evident, major hikes in interest rates would be required further down the line. Also, if monetary policy fails to react sufficiently in advance, it can undermine confidence that inflation targets will be met and can weaken the belief that monetary authorities are committed to a declining path of inflation. This would deprive monetary policy of the ability to influence inflationary expectations in a way that aligns them with future targets.

Given these considerations, it seems important that intervention interest rates begin to be raised gradually, as central banks the world over are doing, such as the Fed and the central banks in Brazil, Mexico and England. Nevertheless, as noted in Chapter II, the balance-of-payments forecasts for 2005 might have underestimated several additional sources of foreign currency, such as larger FDI flows in oil or additional growth in non-traditional exports to Venezuela. Also, the dollar is expected to remain weak against most currencies, because of the external and fiscal deficits in the U.S. economy, and it is possible that commodity prices could stay relatively high next year. As such, the nominal appreciation anticipated for 2005 could exceed the assumption in the basic scenario. In this case, as one of the alternate scenarios of the central forecast model illustrates, interest rates could remain steady for the rest of the year and only begin to increase in 2005.

Based on the foregoing, the Executive Board decided not to change the Bank's intervention interest rate during the third quarter of 2004. It also remains committed to achieving inflation targets that are increasingly lower and convergent with levels attuned to long-term price stability.

As to the exchange rate, the Executive Board continued the foreign currency accumulation policy applied in the first half of the year to mitigate pressure for increased exchange appreciation. Accordingly, several option auctions were held to accumulate US\$200 m in reserves for August and a similar amount for September. These options were exercised in their entirety.

At its meeting on September 17, the Executive Board decided to supplement its exchange market intervention strategy by allowing for the possibility of intervention at its discretion. It also announced its willingness to purchase up to US\$1 billion during the remainder of the year, either through this new mechanism or by means of traditional auctions to accumulate reserves. This decision was taken in response to the negative impact a stronger peso could have on certain production sectors. Added to this was the announcement of the monetary program for the end of the year, which is designed to make sure the increased in demand for money in the economy during the final quarter of the year will be met. The Executive Board indicated the Bank would supply up to Col\$3.2 t in liquidity to the market, primarily through the purchase of international reserves on the exchange market.

Consistent with the practice of central banks the world over, Banco de la República decided it would cease to receive cash deposits in foreign currency from exchange brokers as of October 1.

It is important to reiterate that exchange intervention does not mean the Executive Board has an exchange target or is committed to a particular exchange rate. Intervention of this nature is part of a flexible, inflation-target strategy that allows monetary authorities to encourage growth and to help generate employment, provided it is compatible with inflation targets and price stability, which is the objective assigned to Banco de la República in the Colombian Constitution.

TABLE A

LATEST CHANGES IN BANCO DE LA REPÚBLICA INTERVENTION RATES (PERCENTAGE)

Date	Lombard	Auction	Auction	Lombard
	Contraction		Expansion	
<b>2001</b> 17 de Dec.	6.25	7.50	8.50	12.25
<b>2002</b> 21 de Jan.	6.00	7.00	8.00	11.75
18 de Mar.	5.25	6.25	7.25	11.00
15 de Apr.	4.25	5.25	6.25	10.00
20 de May	3.75	4.75	5.75	9.50
17 de Jun.	3.25	4.25	5.25	9.00
<b>2003</b> 20 de Jan.	4.25	5.25	6.25	10.00
29 de Apr.	5.25	6.25	7.25	11.00
<b>2004</b> 23 de Feb.	5.00	6.00	7.00	10.75
23 de Mar.	4.75	5.75	6.75	10.50

Source: Banco de la República.

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