

# MONETARY POLICY IN COLOMBIA

By : José Dario Uribe\*  
Hernando Vargas

## I. INTRODUCTION

The monetary policy applied by Banco de la República has two objectives:

- One is to achieve and maintain low, stable inflation rates that are consistent with our constitutional mandate to preserve the buying power of Colombian currency. This is possible because inflation, in the midterm and long run, depends on the amount of money in circulation, which is managed by the Bank.
- The other objective is to stabilize the output growth rate near levels that are sustainable in the long term. This is possible because, in short periods (of a few quarters), aggregate spending determines the level of economic production and monetary policy influences spending. The idea, on the one hand, is to avoid unsustainable increases in spending that result in higher inflation, excessive household and company borrowing, and eventually financial crises. On the other, the task is to elude pronounced drops in production and employment, because of the costs they entail for the well-being of the population.

These objectives can be achieved simultaneously when the inflation expectations of companies and workers are anchored in inflation targets set by BR. This obeys a simple theory on inflation, according to which general price level increases respond to inflation expectations and the balance between potential output and aggregate spending. If inflation expectations coincide with the target for inflation, prices and wages in the economy will be determined in a way that is consistent with that target. Under these conditions, inflation tends to rise when spending in the economy exceeds the sustainable long-term production level. If monetary policy lowers the increase in spending, it can meet the inflation target and reduce economic fluctuations at the same time. Likewise, when inflation expectations are consistent with the target and aggregate spending is less than the economy's production potential, inflation will tend to decline. Therefore, monetary policy can raise spending growth to keep inflation on target, while simultaneously encouraging output and employment.

In the language of central banks, this means that monetary policy can be countercyclical (for example, it can effectively cope with a future slump in demand and employment), provided inflation expectations do not stray too far off target. In fact, the most complicated situation a central bank can face is when the economy goes into a recession and monetary policy cannot be used to stimulate it, because inflation is high as a result

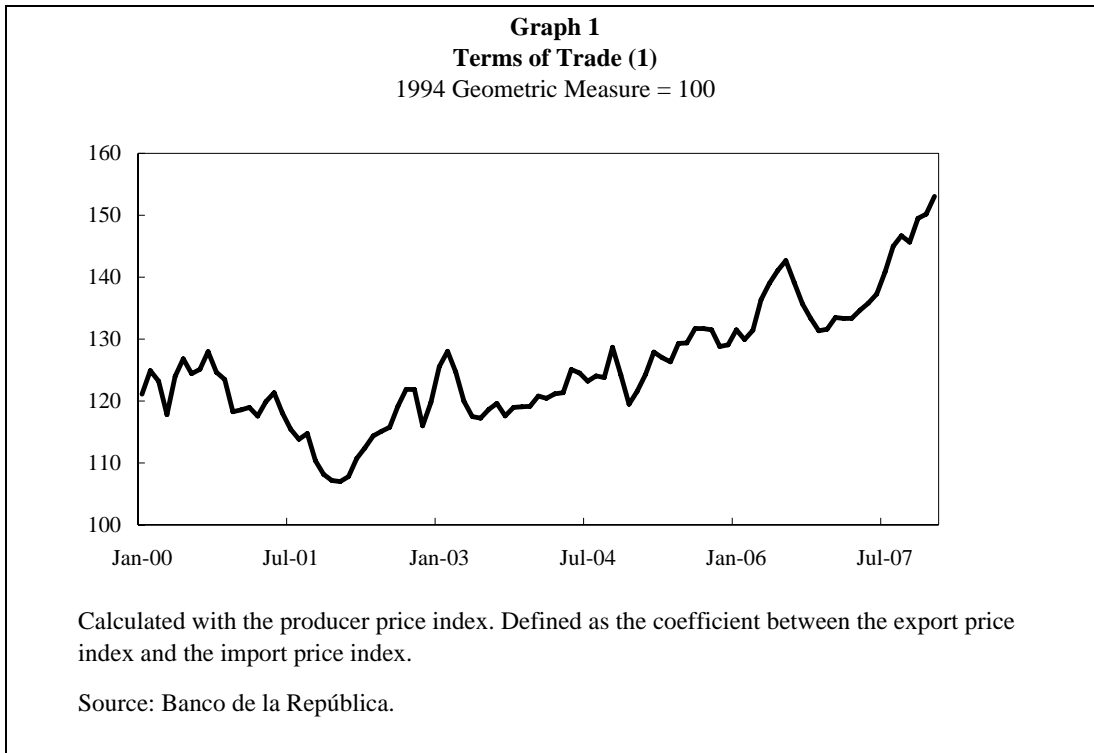
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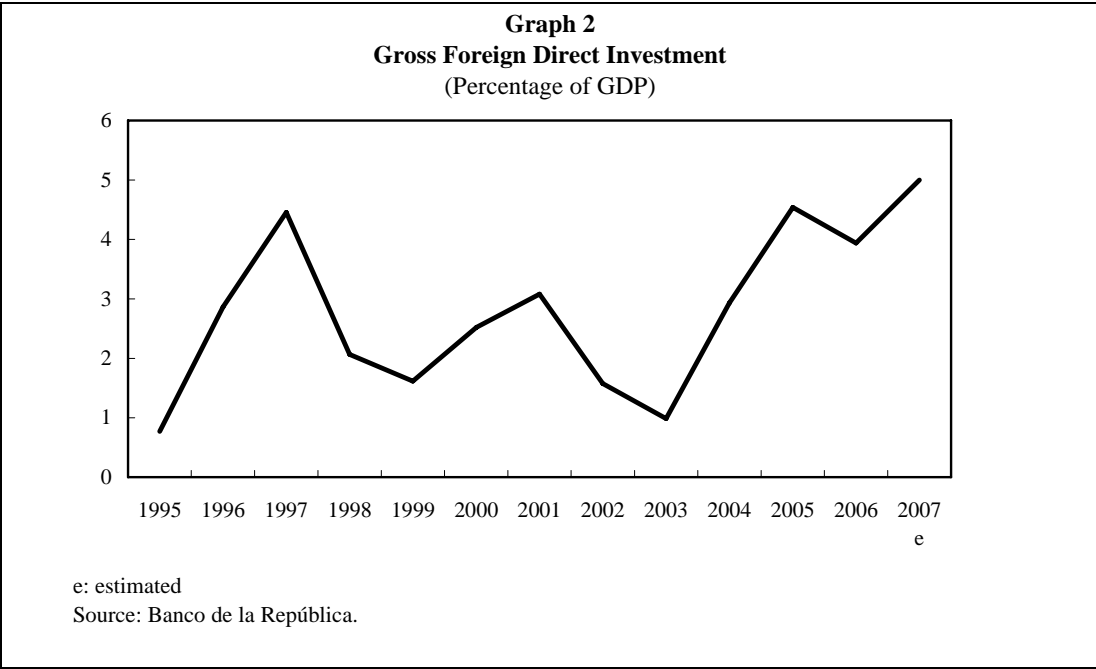
\* Mr. Uribe is the Governor of Banco de la República and Mr. Vargas is the Technical Manager. The opinions in this paper are solely those of the authors and imply no commitment on the part of the Board of Directors of Banco de la República. Preparatory paper for a meeting with the Governor of Banco de la República, the Finance Minister of Colombia and members of the Trade Council in Bogotá on March 5, 2008 Our special thanks to Lavan Mahadeva for his valuable comments and suggestions.

of elevated inflation expectations. Hence, it is no wonder that monetary authorities repeatedly maintain that credibility is a central bank's most important asset. This discussion is particularly relevant today, when inflation and inflation expectations in Colombia are moving away from the inflation targets for the year and the long term.

## II. RECENT HISTORY

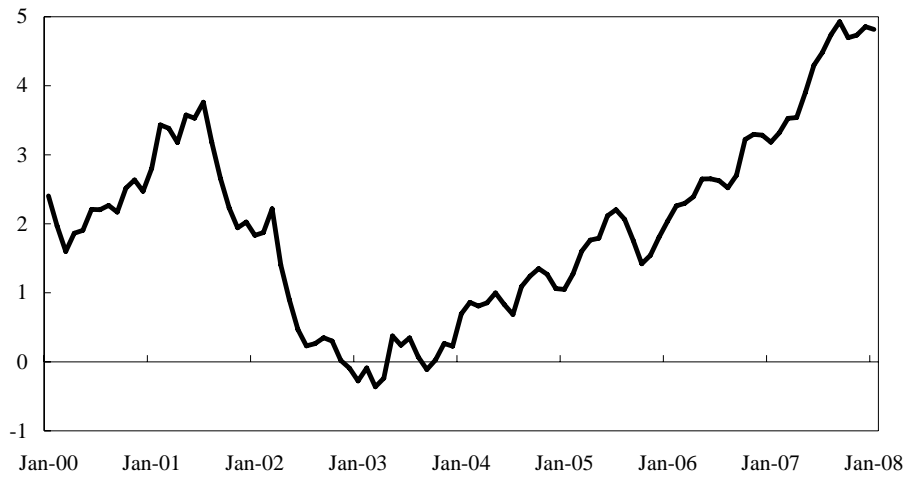
Conditions external to the Colombian economy in recent years have been especially favorable to the growth in output and spending. Terms of trade have increased steadily, reflecting the positive way prices for our export products have performed (Graph 1). But, it is more than a question of prices; export volumes have increased as well, due to strong demand from our major trading partners, principally Venezuela. As a result, Colombians have more income and aggregate spending has grown. The broad liquidity on international capital markets has meant low risk premiums and low external interest rates, all of which has bolstered the demand for local assets and the rise in credit. Better security conditions and improved prices for our exports have propelled foreign direct investment to historic highs (Graph 2).





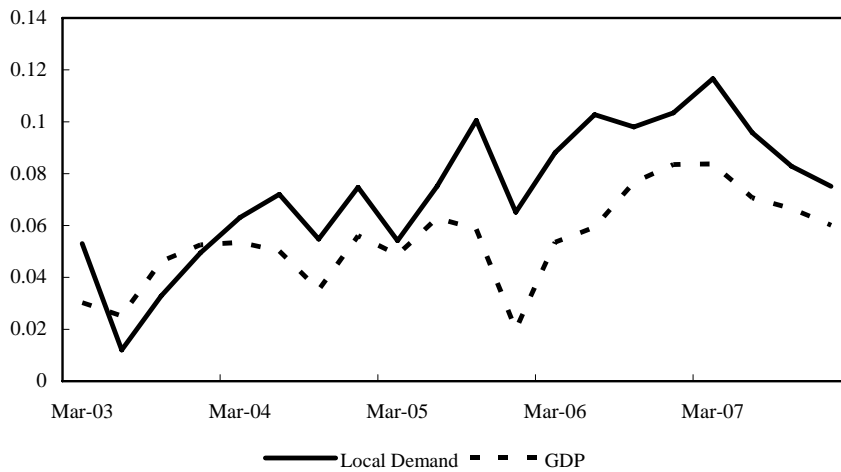
These external factors, combined with improved levels of confidence and an expansive monetary policy implemented during the course of this decade (Graph 3) have fueled a build-up in local demand, which has exceeded GDP growth for the last four years (Graph 4). The productive capacity utilization defects in the Colombian economy disappeared for that reason, and surpluses began to be detected, even despite the sharp rise in investment in machinery and equipment. The increase in spending has been reflected in the growing current account deficit in the balance of payments observed since 2004 (which measures the difference between income and spending in the economy, or savings and investment) (Graph 5) and in higher indicators of core inflation and non-tradable inflation, excluding food and regulated prices, which are up from the historic lows in 2006 (Graph 6).

**Graph 3**  
**Real BR Benchmark Rate (1)**



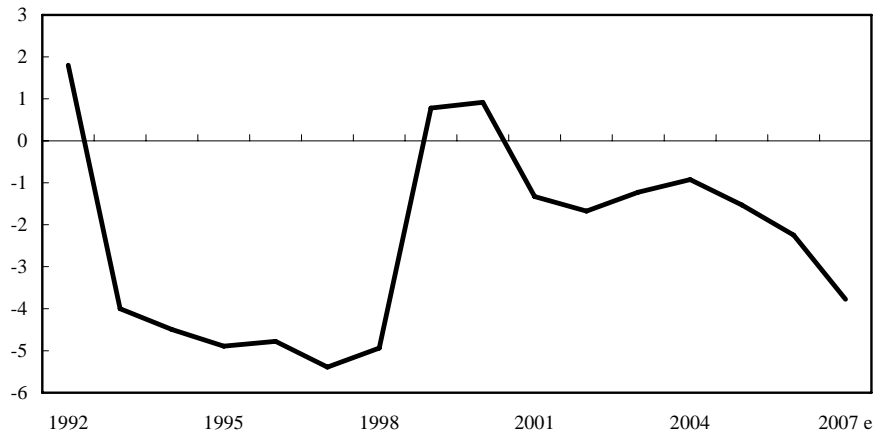
The monthly BR benchmark rate was calculated as the daily average based on the number of working days and deflated with the non-food CPI  
 Source: Banco de la República and DANE

**Graph 4**  
**Annual Growth in Local Demand and GDP**



e: estimated  
 Source: Banco de la República.

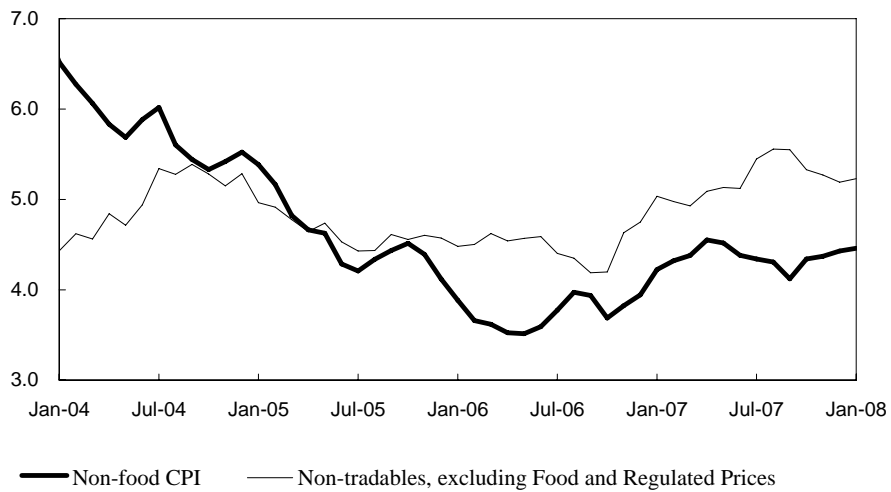
**Graph 5**  
**Current Account**  
 (percentage of GDP)



e: estimado.

Fuente: Banco de la República.

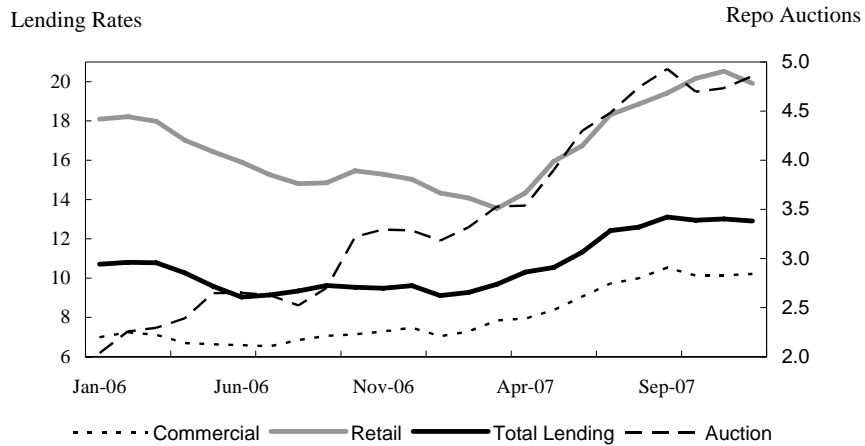
**Graph 6**  
**Annual Inflation**  
 (percentage)



The BR Board of Directors identified these pressures in the first part of 2006. It recognized that, if their trend continued, it could jeopardize the possibility of meeting the annual inflation targets, which decrease gradually toward the long-term level (2% to 4%). For that reason, the BR Board began to raise interest rates from real levels that were low by historical standards (Graph 3). Pass-through of these hikes to market rates during 2006 was almost non-existent, due to a major credit supply shock in the second half of that year. Up to then, financial intermediaries had accumulated sizeable

quantities of public debt paper and, in doing so, had assumed a great deal of market risk. The short-term external turbulence in 2006 devaluated those securities. As a result, intermediaries reduced their exposure to securities and broadened their supply of loans to the economy. Consequently, for several months, real lending rates remained constant or even declined, while BR rates increased (See Graph 7, right scale) and real loan-portfolio growth soared (Graph 8).

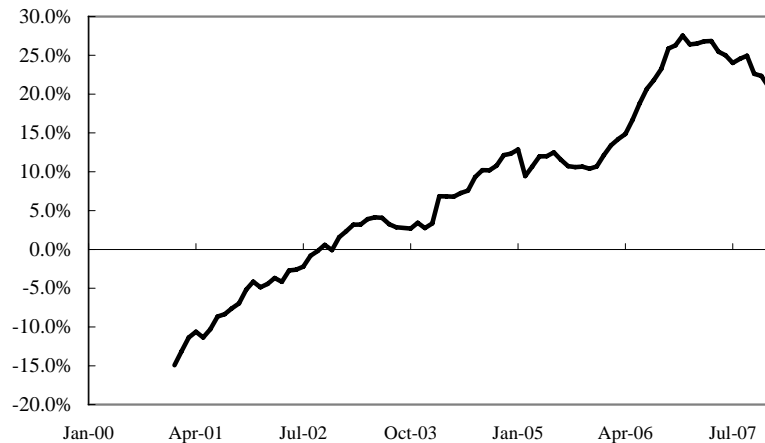
**Graph 7**  
**Real Lending Rates by Loan Portfolio Type and BR**



The variation in non food CPI was used to calculate the real rates.

Source: Banco de la República, National Office of the Superintendent of Financial Institutions and DANE.

**Graph 8**  
**Total Gross Loan Portfolio(\*)**  
**Real Variation (Non-food CPI)**



(\*) Without IFI

Fuente: Banco de la República.

The renewed stimulus to aggregate demand, as well as the slow pass-through of its monetary policy prompted the BR Board to rule additional hikes in the Bank's interest rates throughout 2007 and to set marginal reserve requirements in May and June 2007 for deposits by financial institutions. This last measure was intended to discourage the creation of credit and to make bank loans more expensive by raising the intermediation margin.

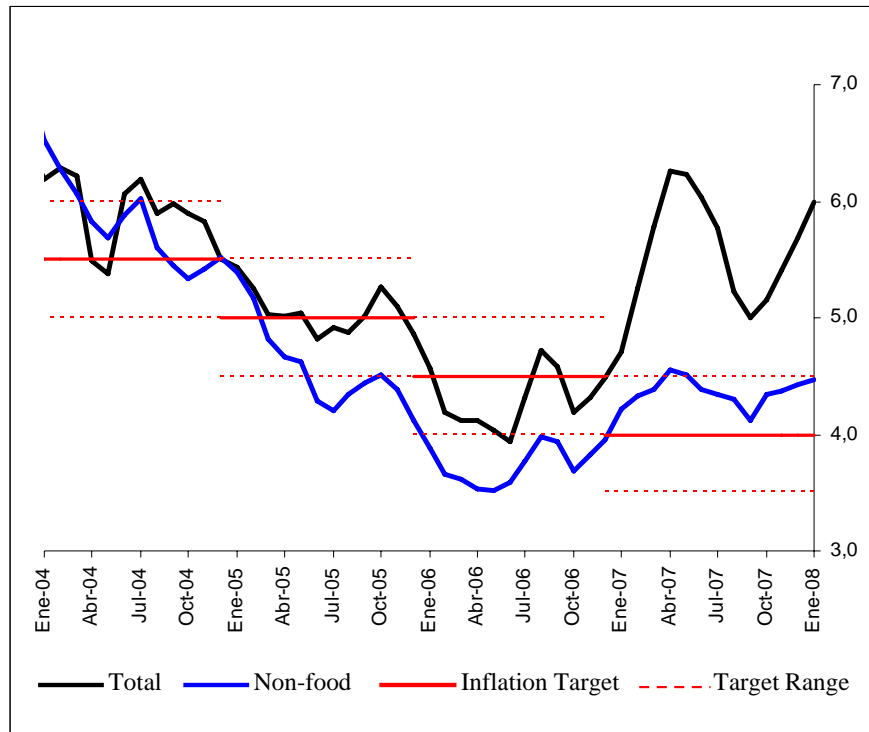
In time, these monetary policy measures began to have an effect on lending and deposit rates in the market and helped to curb credit growth. Recent quarters have seen a slowdown in local demand as well (Graph 4). However, the real increase in credit aggregates and spending components remains high. For example, credit is growing at real annual rates close to 15%, which is more than twice the economic growth rate.

Under these conditions, some strong relative price shocks have occurred for a variety of reasons. Fuel and transport prices have come under pressure because of rising international oil prices. The trend in oil prices at the international level has bolstered the demand for bio-fuels, elevating the price of grains and vegetable oils. Growing world demand for food, fueled by the Asian economies, also has had an impact on international prices for a number of foodstuffs. All these factors have influenced food prices in Colombia, which also have been affected by the demand in Venezuela (in the case of meat and other products) and by temporary weather conditions (in the case of potatoes and vegetables).

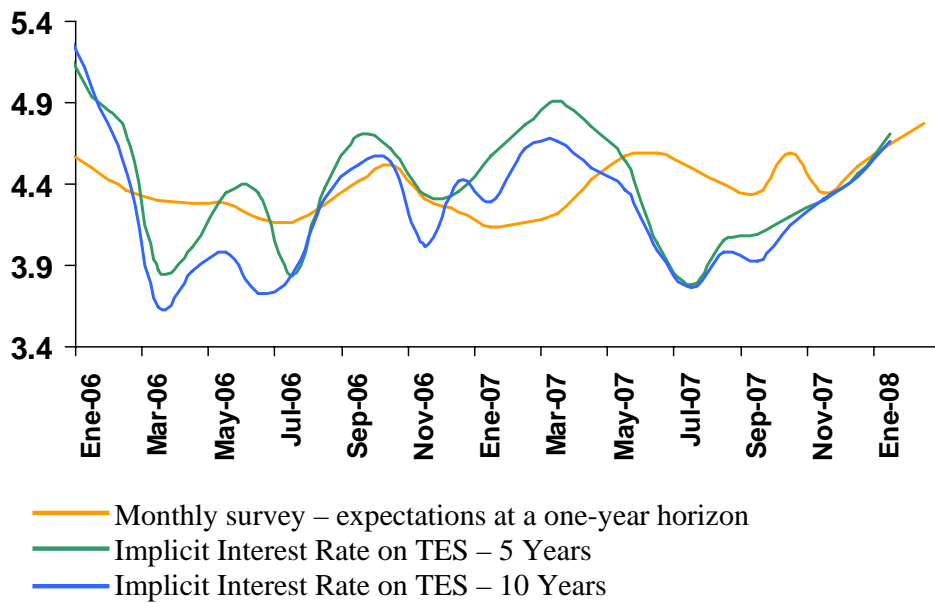
Consequently, the situation is one where the economy faces demand-pulled pressures and has suffered relative prices shocks of diverse duration. The result is consumer inflation over the target range for 2007 (3.5%-4.5%) (Graph 9) and, more recently, an increase in inflation expectations, as reflected in higher interest rates on TES (Graph 10). Peso appreciation has relieved some of the pressure exerted by inflation, as manifest by the increase in the tradable CPI, which fluctuated between 1.5% and 2.5% during the last few quarters. However, appreciation has been very slow to work its way through to inflation, as demonstrated by the fact that price performance for tradable goods coincides with nominal appreciation above 12%. This can be explained by the fact that prices for tradable goods obey not only the exchange rate, but also local conditions such as inflation expectations and aggregate demand.

If the relative price shocks were to reverse rapidly, without affecting inflation expectations, the job of monetary policy would be simple. However, inflation expectations have already surpassed the inflation target for the year and the long-term target. This change is a cause for concern, because it occurred during the quarter when most CPI-measured prices are set and in the context of a relatively tight job market. In a situation where inflation is on the rise and the credibility of monetary policy is low, the competitiveness of national production is negatively affected and the cost of future disinflation in terms of growth in output and employment becomes more detrimental.

**Graph 9**  
**Annual Consumer Inflation**



**Graph 10**  
**Inflation Expectations as of January 2006**





### III. FORECASTS, RISKS AND RECENT DECISIONS

To determine its stance, Banco de la República's monetary policy is forward looking. In particular, it conditions changes in interest rates to the discrepancy between projected inflation and the inflation targets. The situation described earlier suggests a dangerous combination of demand-pulled pressures, relative price shocks, some of which can be lasting, and increased inflation expectations. In addition to this description of the state of the Colombian economy, there are three important points to be considered with respect to the outlook for inflation:

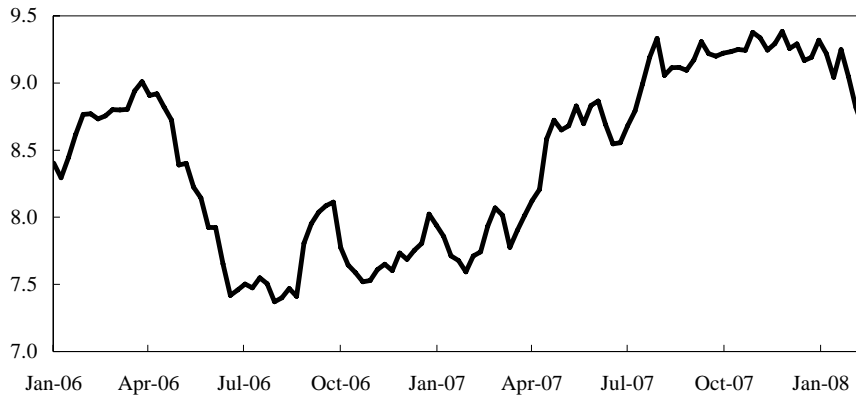
- To what extent have the monetary policy measures adopted already worked their way through to the financial and commodities markets?
- Has that pass-through been enough to comply with the midterm and long-term targets for inflation?
- What are the risks in the external situation and what do they imply for aggregate demand and inflation?

As to the first question, the reaction of market interest rates to BR's policies has been in the right direction. As illustrated in Graph 7, the average real lending rate has stabilized at a level on par with the BR rate. Moreover, the effect of reserve requirements on interest rates and credit appear to have been important, considering that the intermediation margin has been stable since October 2007 (Graph 11).

With respect to the second question, credit and spending have slowed, as mentioned earlier. However, there is still a great deal of growth in both these items and recent indicators, such as surveys on consumer confidence, industrial production, employment and the figures on foreign trade, point to solid aggregate demand. Added to this is the sharp rise in foreign direct investment so far this year and the improvement in terms of trade witnessed during recent weeks. If these trends continue, they mean more income and a boost to spending. On the other hand, non-food CPI inflation and rising prices for non-tradable goods and services, excluding food and regulated prices, have stabilized (Graph 6), halting the upward trend observed since the second half of 2006, but at high levels with respect to the inflation target for 2008 and the long-term target.

In short, the policy measures adopted by the BR Board have made credit more expensive, slowed its growth, helped to curb spending and stabilized core inflation. However, their effect has been limited and the economy continues to exhibit demand-pulled pressures. A look at the real lending rate, which has yet to exceed its average since the 1980s (Graph 12), confirms the fact that the real interest rate hikes have not been disproportionate.

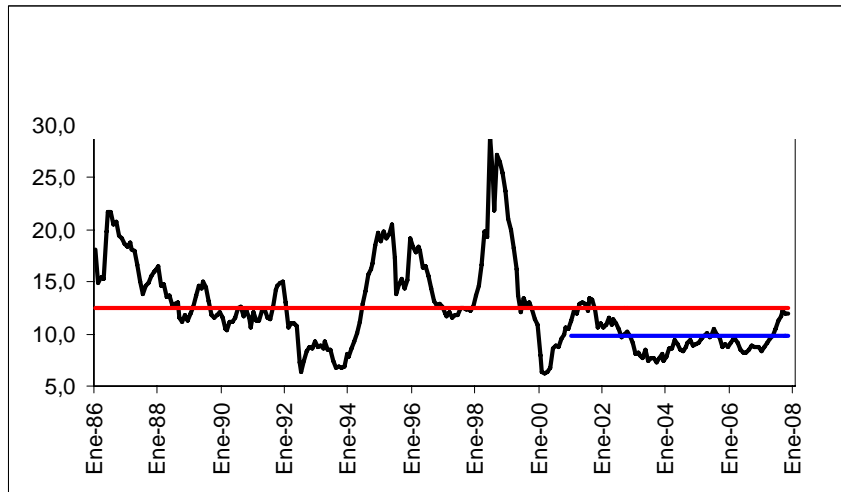
**Graph 11**  
**Intermediation Margin in the Financial System**  
 Weekly Data - Five-order Moving Average (1)



(1) The intermediation margin is calculated as:  $MI = ((1+i_{active})/(1+i_{pasive}))-1\dots$   
 Where  $i_{active}$  is the total treasury paper rate in the BR system and  $i_{pasive}$  is the weighted deposit rate.

Source: National Office of the Superintendent of Financial Institutions and BR calculations

**Graph 12**  
**Real Lending Rate**  
 (Non-food CPI)



— Real Non-food CPI    — Historic Average    — Average since 2001

Historic Average: 12.47%  
 Rate Observed in January: 11.64%

As to the third question, the United States economy has likely entered a recession, which would mean low GDP growth for that country in 2008. This, in turn, has exerted a negative effect on a number of European economies, not so much because of fewer

exports but due to the impact on the credit market and confidence. Naturally, this will lower the demand for Colombian exports to those countries. However, it is important to remember that Asia has contributed significantly to world economic growth and to the rise in international commodity prices. That region is expected to see a high rate of growth in 2008. Therefore, it seems reasonable to assume the world economy will continue to expand at a pace that would keep international prices for our major export products at high levels.

The recent political and diplomatic events with Venezuela and Ecuador cast a serious shadow of doubt over the macroeconomic outlook and the inflation forecast. If there is no serious interruption in trade with those countries, growth in aggregate demand will remain strong. In fact, the BR forecasts, which are based on the assumption of 0.8% economic growth in the United States, restrictions on some Colombian exports to Venezuela (mainly automobiles), high terms of trade and strong inflows of foreign direct investment, suggest the Colombian economy will grow by about 5% in 2008 and that inflation pressures could continue.

However, aggregate demand would be acutely affected by major restrictions on trade with Venezuela and Ecuador, given the amount of Colombian exports to those countries (almost US\$ 6 billion). For the same reason, those kinds of restrictions also would bring upward pressure to bear on the exchange rate, an effect that could be reinforced if the political and economic situation discourages certain capital flows. An adjustment in the exchange rate is healthy, provided it does not aggravate pressure on inflation, which is likely if inflation expectations are anchored in the inflation targets. Under those conditions, depreciation would alleviate the impact on the tradable sectors of the economy and, as explained initially, BR could adopt a countercyclical monetary policy to reduce the effects of the slowdown in demand.

## **V. CONCLUSION**

The Colombian economy has experienced a period of growth in recent years unlike any witnessed since the early 1970s. Our monetary policy has helped to make that growth sustainable by raising interest rates when the forecasts for inflation exceed the targets and there is surplus demand in the economy. The latest available information suggests that demand continues to exert pressure and that inflation and expectations of inflation are over target. However, it is obvious that growth in demand and credit has slowed and that part of the rise in consumer prices is the result of relative price shocks in Colombia and abroad. The future path of monetary policy will depend largely on how the external context evolves.

As we have seen, external shocks are affecting Colombia in opposite ways. On the one hand, the increase in international prices for food and fuel is causing upward pressure on inflation. From the standpoint of monetary policy, the primary goal is to prevent those price hikes from turning into generalized price increases. This is why it is essential to have balanced growth in supply and demand and inflation expectations that are anchored in the targets set by the monetary authority. The experience of various countries during the 1970s holds important lessons in this respect, as discussed in Attachment 2.

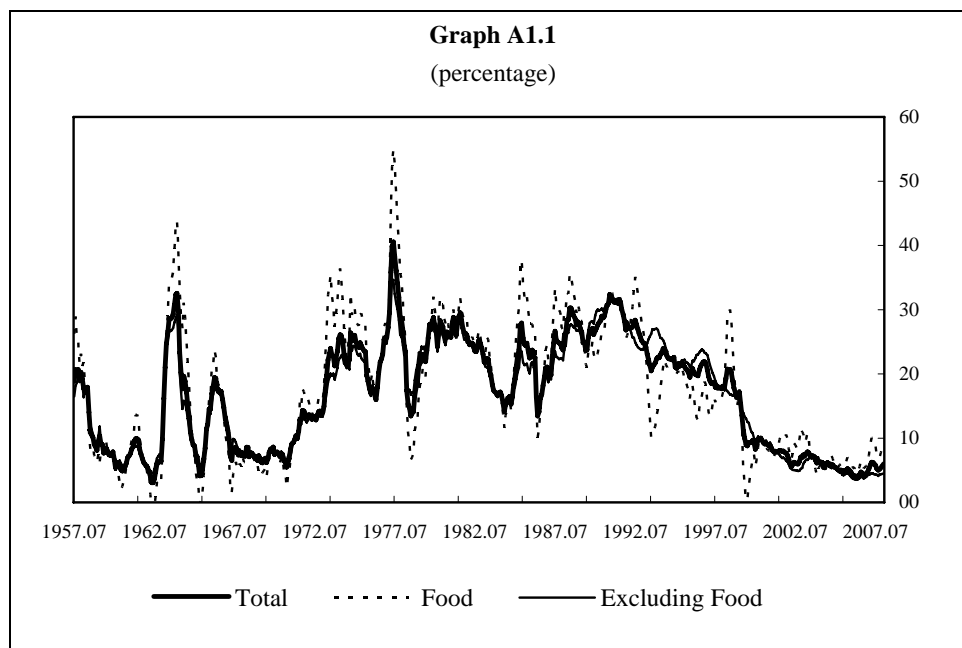
On the other hand, the decline in growth in the United States and Europe, coupled with the political and diplomatic problems with Venezuela and Ecuador, could cause the demand for Colombian products to plummet. In that case, the challenge to monetary policy would be to help the economy to grow at a sustainable rate and to keep inflation on target. As is to be expected, in a scenario marked by a sharp drop in the external demand for Colombian products, the country's monetary policy would do well to favor economic growth in a context where the monetary authority has credibility and inflation expectations converge toward the targets. This underscores the importance of exchange flexibility and the monetary policy actions initiated in April 2006, and a central bank that is committed to meeting the inflation targets.

The inflation-targeting system is flexible and allows for dealing with shocks to the economy such as those described earlier. The BR Board of Directors meets once a month and bases its decisions on a detailed analysis of all data and evidence that is available on the day of the meeting. This framework has worked in the past, and will work in the future as well.

## ATTACHMENT 1<sup>1</sup>

### Monetary Policy and Food Prices

Food prices in Colombia and the rest of the world are extremely volatile. However, in the long run, food inflation responds to monetary policy measures. As illustrated in the following graph, food inflation in Colombia has declined on par with general inflation. Our monetary policy influences the price of food (and all goods and services) through its impact on the level of prices in general.

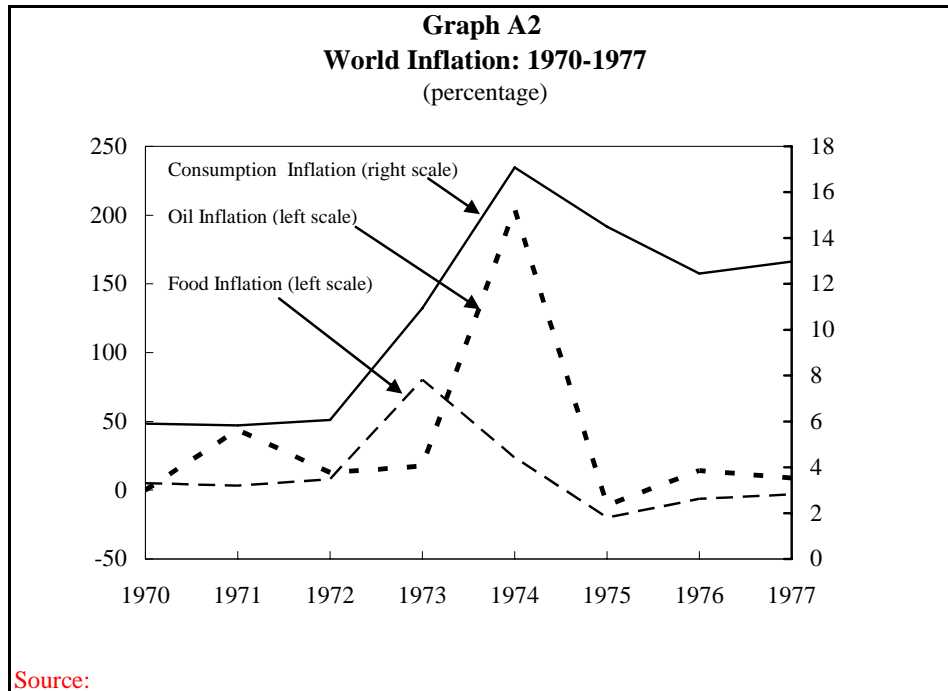


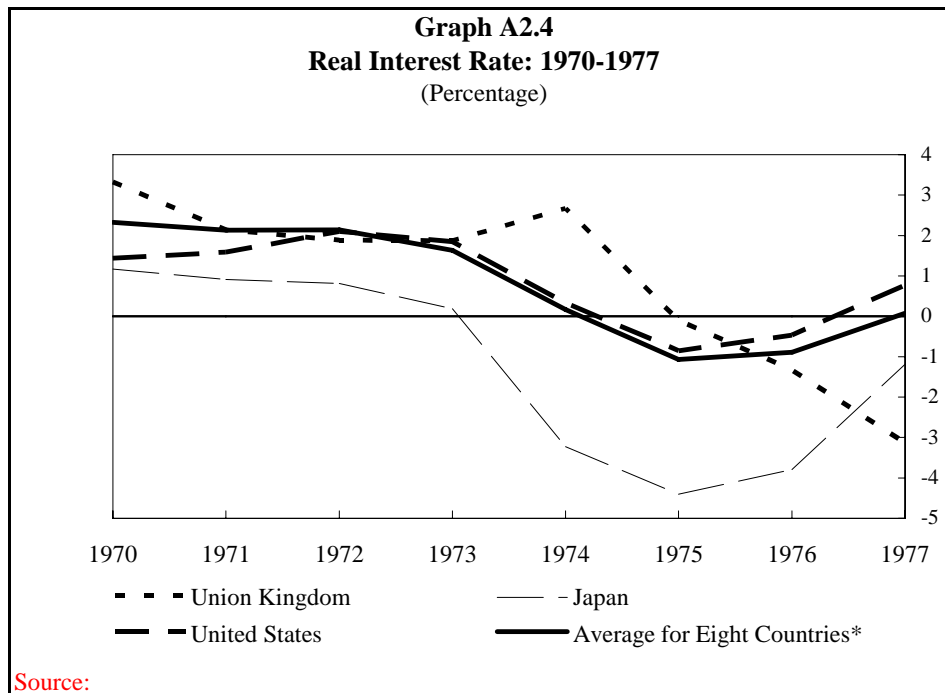
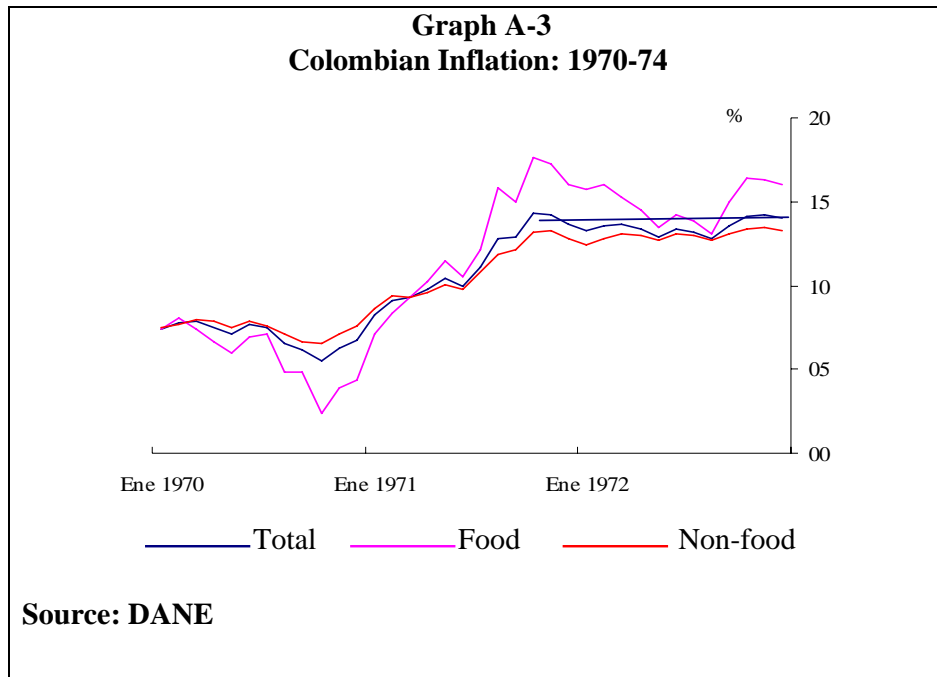
<sup>1</sup> The present attachment and following one make extensive use of a note on this matter by Lavan Mahadeva.

## ATTACHMENT 2

### The Risk of Accepting Added Inflation Expectations

When a central bank accepts higher inflation, with the argument that it stems from external shocks beyond its control, it assumes an important risk inherent in the presence of high and rising inflation expectations. During the 1970s, monetary authorities in Colombia and a number of countries throughout the world reacted this way to the oil shocks at the time (Graphs A-2 to A-4). The result was a permanent increase in inflation, as higher expectations were incorporated into prices and wages. Subsequent efforts to lower inflation culminated in a great deal of volatility in output and employment, and in strong recessions orchestrated by the central banks to regain control over inflation and to recover lost credibility.





Finally, it is important to remember that high and volatile inflation takes a toll on long-term economic growth and the well-being of the population. Productive resources are allocated inefficiently, and income and wealth are distributed arbitrarily. The reverse long-term relationship between output growth per capita and inflation in Colombia illustrates this fact (Graph A -5). This explains the importance Banco de la República gives to anchoring inflation and inflation expectations at low levels.

**Graph A2.5**  
Per Capita Growth and Inflation

