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La política monetaria en Colombia

Javier Guillermo Gómez*

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Resumen

En este artículo se hace una narración de la política monetaria en Colombia, por ser ésta una narración en una economía abierta se enfatiza en los conceptos de "trilema" de la política monetaria, ancla nominal y regímenes monetarios; además, la narración incluye el período actual de régimen de inflación objetivo, presenta los antecedentes académicos y la definición de dicho régimen y las características actuales de éste en Colombia. La principal implicación de política radica en que, como requisito primordial para conservar la estabilidad de precios, el Banco de la República procure mantener la meta de inflación firme, y dirija las tasas de interés en consecuencia, ante aumentos de la inflación producidos por presiones de demanda, devaluaciones y crecimiento en la inflación de alimentos.

Clasificación JEL: E52; E58; F32; F41.

Palabras claves: *política monetaria; trilema; ancla nominal; régimen monetario; inflación objetivo.*

Monetary Policy in Colombia

Javier Guillermo Gómez *

This article is a historical account of monetary policy in Colombia. Since it is an account of monetary policy in an open economy, the emphasis is on the concepts of the “trilema” of monetary policy, nominal anchor, and monetary regimes. In addition, the account includes the current period of inflation targeting regime, presents the academic antecedents and the definition of inflation targeting, and describes the current characteristics of this regime in Colombia. The main policy implication is that the most important requirement for maintaining price stability is for the Banco de la República to keep the inflation target firm, and, steer interest rates to meet the inflation objective in the face of increases in inflation caused by demand pressure, devaluation and increases in the inflation of food prices.

The points of view expressed in this paper do not represent nor compromise the position of the Banco de la República nor that of its Board of Directors. The Spanish version of this paper appeared in Gómez (2006a).

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I. INTRODUCTION

An account of the history of monetary policy in Colombia should ideally use concepts such as the monetary policy “trilema” and nominal anchor of the economy. The reason for this is that these concepts are relevant in a small open economy, especially when there are regime changes such as those which occur in accounts that cover different exchange rate regimes and when the crisis of a regime is caused by the lack of a clear solution to the trilema.

The current article is an account of monetary policy in Colombia on the basis of the concepts of trilema and nominal anchor. This account includes the current period of the monetary regime known as inflation targeting. Due to this, the article starts out by describing the academic antecedents of this regime and its characteristics.

An excellent presentation of monetary policy in Colombia during the 20th century is found in Sánchez, Fernández and Armenta (2005). These authors’ contribution follows Friedman and Schwartz’s (1963) narrative and episodic approach. The contribution of this article with respect to the state of the literature in Colombia, which is Sánchez, Fernández and Armenta’s important contribution, is first, an account of monetary policy based on the concepts of trilema and nominal anchor. Secondly, the report includes the period of the inflation targeting regime and the characteristics of this regime in Colombia.

The plan for the article is to explain the relevant concepts before tackling the history of monetary policy. The concepts of trilema of monetary policy and nominal anchor of the economy are dealt with in section II. The academic antecedents for the strategy of inflation targeting and the characteristics of this regime are dealt with in section III. The history of monetary policy is presented in section IV. The current elements of the inflation targeting strategy in Colombia are introduced in section V. After presenting the results of the monetary policy in terms of the evolution of inflation (VI), the article concludes

with some of the challenges that the conduct of monetary policy in Colombia may confront in the future (VII).

II. SOME CONCEPTS RELEVANT TO AN ACCOUNT OF MONETARY POLICY IN A SMALL OPEN ECONOMY

A. THE TRILEMA OF MONETARY POLICY

The trilema of monetary policy (Mundell, 1963) consists of the fact that monetary policy is faced with three objectives. Each of these objectives is desirable in and of itself although the three are impossible to achieve at the same time. The first objective is to reach a defined objective in the exchange rate. The second is to achieve a specified level in the interest rate. The third is to have capital mobility.

The exchange rate goal is desirable to achieve objectives with respect to international trade. The interest rate goal is desirable for reaching domestic objectives related to economic activity. The third one, capital mobility, is desirable to foster efficiency in the allocation of savings and domestic competitiveness. Each one of these goals is desirable in and of itself, but only two can be achieved simultaneously. That is the trilema.¹

The trilema puts forward possibilities and imposes some restrictions on the framework for the operation of monetary policy. In effect, if there is international capital mobility, monetary policy will have to adopt one of two corner solutions. The first, which is the most probable if the monetary policy has credibility, would be to adopt the inflation target or money supply as the nominal anchor and guide monetary policy towards internal objectives such as inflation and the economic cycle. The second, which is the most probable if there is a history of hyperinflation, would be to adopt the exchange rate as the nominal anchor, abandon an independent management of monetary policy and allow the interest rate to endogenously move along with the level of the reference country; for example, to follow the interest rate of the United States which naturally pursues targets related to that country.²

¹ The trilema can be demonstrated by putting together capital mobility and one of its implications, the uncovered interest rate parity.

² The monetary history of Latin America has shown that a fixed exchange rate regime is a solution that is available to those countries that do not have a history of discipline and credibility in their

If international capital mobility is low, it would be possible to achieve simultaneous objectives in the exchange rate and interest rate. This is the case of some countries in Africa in which, in spite of the fact that they allow free international capital mobility, capital does not flow. This is also the case in countries to which capital would flow to a greater extent if it were allowed to, but where the authorities have established controls that hinder its mobility. The best-known case at present is that of the largest and most dynamic emerging countries, China and India. However, India recently announced that by 2008 it would be dismantling its controls on capital flows.

B. THE NOMINAL ANCHOR AND REGIMES FOR THE CONDUCT OF MONETARY POLICY

When there is inflation, all of the nominal variables increase. The nominal wages, exchange rate, and money supply increase to rates that, in the long run, maintain a direct relationship with the rate of increase in prices. The nominal interest rates also maintain a direct relationship with the growth of the nominal variables in the long run.

The goal of price stability can be attained by means of three different strategies or monetary policy regimes: monetary, fixed exchange rate and inflation targeting. Each one of these strategies corresponds to three nominal anchors: money, exchange rate, and inflation target. The most important decision in monetary policy is to decide which is the nominal anchor for the economy, or in other words, the strategy or regime for the conduct of monetary policy.

In addition to these three strategies, the reality is that various economies implement monetary policy with intermediate or hybrid regimes. The intermediate strategies are not very transparent and, in general, are difficult for the public to understand and even, on occasion, for the very people entrusted with making monetary policy decisions. Corner solutions have the advantage of being transparent and the way they operate is easy for the public to understand. The corner solution in the case of a floating exchange rate is more idealized since countries generally intervene in

monetary policy. But a fixed exchange rate is also an option for countries with shocks that are symmetrical to those of the reference country. The theory of optimum monetary areas may be consulted on this topic (see Mundell, 1961).

the foreign exchange market directly (with international reserves) or at least, indirectly (with the interest rate). However, New Zealand and Switzerland are concrete cases of corner solutions in the case of exchange rate flexibility and all countries that are dollarized or have a currency board in the case of rigidity.

Throughout history, countries have opted for one of these anchors or intermediate regimes thus giving rise to different arrangements for the international economy. For example, the Bretton Woods system (1944-1973) established fixed parities with respect to the dollar for each country and a parity of the dollar with respect to gold. The subsequent system which began in 1973 allowed exchange rates to float and began to define the growth of nominal variables by means of a monetary anchor. In the '90s when the relationship between money and inflation became less predictable, the inflation target became the nominal anchor for a growing number of countries.

C. *THE EXCHANGE RATE REGIME*

The different monetary policy regimes are related to the exchange rate regimes. As was mentioned earlier, the most flexible frameworks for the exchange rate make it possible for monetary policy to be directed towards internal objectives such as output and inflation stability. The most rigid frameworks make it possible to anchor inflation to that of the reference country at the cost of delegating monetary policy to that country.

There is a range of exchange rate regimes that go from complete floating to absolute rigidity. At the most flexible extreme is independent floating and going in order from flexibility to rigidity, it is possible to enumerate other regimes such as those of managed floating, a system of exchange rate bands, a fixed but adjustable exchange rate, currency board, dollarization, and finally, a monetary union.

In the classification of exchange rate regimes, it is necessary to take the distinction between *de jure* and *de facto* regimes into account. According to Calvo and Reinhart (2002) and, for example, Levy-Yeyati and Sturzenegger (2005), even though the monetary authorities of various countries formally state that the exchange rate regime has specific characteristics, in reality, the regime is different. The monetary authorities frequently state that the exchange rate is flexible but intervene in the foreign exchange market to the extent

necessary for the exchange rate to be rigid. Exchange rates that are officially flexible are, in fact, rigid.

D. THE ANCHORS AND THE TRILEMA

If the regime for the conduct of monetary policy is based on a monetary strategy, the nominal anchor is the money supply. Based on the trilema, the exchange rate could be controlled or not depending on whether or not there is capital mobility. If the movement of capital is controlled or if capital mobility is low, the exchange rate can be guided to the desired level. If there is capital mobility, the exchange rate should float.

In the exchange rate strategy, the nominal anchor is the exchange rate itself. According to the trilema, if the flow of capital is controlled, the central bank could steer the interest rate towards internal objectives. If there is capital mobility, the interest rate should be endogenous to that of the reference country.

In the inflation targeting strategy, the nominal anchor is the inflation target. Those countries that have adopted inflation targeting generally have capital mobility and therefore in these countries the exchange rate generally floats. However, in inflation targeting countries floatation is quite managed (Ho and McCauley, 2003).

E. INSTRUMENT, INTERMEDIATE TARGET AND GOALS OF MONETARY POLICY

Monetary economists generally classify the instruments and goals of monetary policy under each monetary regime based on three categories: the operative target, the intermediate target and the final target.

The final target is the final objective of monetary policy. This objective, in general, is broadly defined as price stability and understood as a low, positive rate of inflation. Another objective that is frequently included in the constitutional or legal mandates that central banks are required to follow is output stability. This objective is not incompatible with the objective of inflation stability if the main shocks to the economy are to aggregate demand. However, if the main shocks

have to do with changes in supply, the objectives of inflation stability and output stability are incompatible.³

The operative target for monetary policy is the instrument that is most directly under the control of the monetary authority, and the intermediate target is a variable that has a stable relationship or, at least, a predictable one, with the final objective. The intermediate target should also be controllable by the monetary authority through the management of the operative target.

In the monetary regime, the operative target is generally the interest rate and the intermediate target is a monetary aggregate. The monetary aggregate that is chosen within this strategy should be controllable through the interest rate instrument and should have a stable statistical relationship with inflation. The mechanics of the monetary strategy is the following: if the monetary aggregate is above a target level, the interest rates increase and if it is below, the interest rates decrease.

In the exchange rate strategy, the operative target is the exchange rate itself, but it could also be the interest rate. If it is the exchange rate, the central bank makes a commitment to buy and sell international reserves to the extent necessary at the pre-established rate. If it is the interest rate, the central bank moves the interest rate so that the exchange rate, which is determined by the market, is fixed. In the latter case, the exchange rate is the intermediate target.

In the inflation targeting strategy, the operative target is the interest rate and the intermediate target is the inflation forecast. Inflation moves towards the target by means of a forward looking operative mechanism based on the transmission mechanisms of monetary policy that will be referred to later. If the forecast is above the target, the interest rate increases and vice versa.

III. THE INFLATION TARGETING REGIME

Previous studies on inflation targeting began by naming the countries that had adopted this framework for the conduct of monetary policy. Today, due to the fact that it is more widespread, it seems more reasonable to name the countries that have

³ This will be dealt with again later on when the relevance of the shocks in food supply for the monetary policy of Colombia are explained.

not adopted this strategy yet. Leaving aside the countries with a fixed exchange rate, the most important cases of countries that have not adopted the inflation targeting regime yet are the United States, Europe, Japan, China and India. Some economists argue that the United States follows a strategy of implicit inflation targeting.

As noted by Truman (2003), of the countries that have adopted the inflation targeting strategy, none have abandoned it except Spain and Finland inasmuch as they joined the single currency of the European Monetary System. For now, and again following Truman (2003), this seems to be an outstanding record for a monetary policy strategy management which, at the most, has been in operation for only 15 years in the countries that initially implemented it.

A. *CONCEPTUAL ORIGINS*

1. **Inflation, a monetary policy phenomenon**

As we said before, the nominal variables of the economy maintain a positive relationship in the long run. Due to the positive relationship between inflation and a nominal variable in particular —the money supply—, Milton Friedman made famous the statement: “inflation is always and everywhere a monetary phenomenon”. There is a sense of unidirectional causality in this statement. Years later, his disciple, Robert Lucas, also from the University of Chicago, would show that the growth of prices maintained a positive relationship with the growth of the money supply and also with another nominal variable —the nominal interest rates (Lucas, 1980)—. It is easy to extend Lucas’ exercise to show that inflation also maintains a positive relationship with other nominal variables such as wages and the exchange rate.

So when there is inflation, there are higher growth averages for all of the nominal variables: money, wages and the exchange rate, and there are also higher nominal interest rates. However, this relationship lacks causality. Is inflation a monetary phenomenon? Or in other words, is the growth of the money supply the cause of inflation? The answer is no. For example, if the exchange rate is fixed, inflation is not the result of the growth of money, but the cause. To be fair, for Friedman and Schwartz (1963) inflation is a monetary phenomenon, even in the case of the automatic adjustment of a fixed exchange rate regime, as in the case of the price-specie-flow mechanism of the gold standard.

We have seen that the way inflation is determined (and therefore, the rest of the nominal variables in the economy) depends on the nominal anchor or on the choice of strategy for the management of monetary policy. Nevertheless, Friedman's statement often makes economists think that inflation is a monetary phenomenon, under any anchor, independent of what the regime for monetary policy management is. It is as if economists thought that inflation was a natural phenomenon that is always and everywhere mysteriously determined by the growth of the money supply. This type of thinking does not seem correct. Instead of that, it is a creation of man and, through men's choice of nominal anchor, it is the result of the management of the respective instrument within the chosen anchor.⁴ If the nominal anchor is the exchange rate, inflation is not a monetary phenomenon or it is only in the sense of correlation and not of causation. Also, and in a sense that is more relevant for Colombia, if the anchor is the inflation target, the same thing happens.

If we were going to use Friedman's statement in the sense of causation, we could do it with an important qualification. "Inflation is [...] a monetary policy phenomenon" (Westaway, 2000). The monetary policy decision that determines inflation is the choice of anchor and the way the monetary instrument is utilized within this regime. If the anchor is money, inflation is a monetary phenomenon. If it is the exchange rate, inflation is, in the long run, a phenomenon of how sizable international inflation is and what the path of the exchange rate is. And if the anchor is the inflation target, inflation is a phenomenon of how the central bank fixes the inflation target and whether or not it meets the long term target or not.

2. Inflation, the target of monetary policy

The development of monetary theory and the experience of various countries have led economists to certain consensuses. The theoretical questions on what the consequences of monetary policy on economic activity and inflation are have now been answered (see, for example, the survey that McCallum does in the introduction to his 1988 article).

Can monetary policy stimulate the level of economic activity? It is widely accepted that monetary policy has an impact on economic activity in the short run but that, in the long run, monetary policy does not have any effect. Monetary policy cannot

⁴ This is also the argument in Svensson (2005b).

stimulate the level nor the rate of output growth permanently. As a result of the stagflation in the United States in the '70s, the literature on rational expectations demonstrated that a monetary expansion is incorporated into inflation expectations and the effect of an expansionary monetary policy is only on inflation and over the long term. In the long run, monetary policy does not have an effect on economic activity.

Other literature, the literature on the cost of inflation on welfare, has shown that inflation causes a lower output level (see, for example, Lucas, 2000).⁵ This is a type of non-neutrality of monetary policy that implies that the central bank's activism can only have costs.

The most important implication of these consensuses is that the central bank's responsibility is to give the economy a nominal anchor. Truman (2003:17) points out that these consensuses are the core of the academic antecedents of inflation targeting. It is in the long-term growth of nominal variables where central banks have a high degree of control and this is what monetary policy can do. In Bernanke *et al.*'s words, inflation targeting can make monetary policy "[do] what monetary policy can [do and not do what it] cannot do" (1999:11).

B. CHARACTERISTICS OF INFLATION TARGETING

Economists define the strategy of inflation targeting by its characteristics. According to Svensson (2005) there are three characteristics:⁶ an inflation target, transparency, and a systematic response of monetary policy that is forward looking.

1. An inflation objective

The inflation objective is a constitutional or legal mandate that requires that the central bank pursue price stability. In the absence of a constitutional or legal requirement, the goal of price stability should be important in the thinking of monetary policy makers and in the monetary policy decisions they make.

⁵ Other literature as well shows that inflation is negatively related to the output growth rate (the seminal article for this empirical literature is Barro, 1995).

⁶ Svensson (2005) includes all other characteristics of inflation targeting under one of these three characteristics.

2. Transparency

Svensson (2005) defines transparency as the rationality and clarity of the monetary policy decisions and the availability of information that makes it possible to learn the rational behind those decisions.

One characteristic of inflation targeting that is related to transparency is accountability. The central banks that follow an inflation targeting strategy are generally responsible to the government, Congress, or to the public in general.

To provide transparency, central banks that pursue inflation targets use a set of communication instruments such as press releases, press conferences, and inflation reports.

The inflation reports communicate the results and projections of inflation, the reasons for inflation deviations with respect to the target and the monetary policy decisions intended to make inflation move towards the target in the medium term. In more technical documents that are accessible to the academic community, the banks communicate their perception of how the economy functions and how the mechanisms that make inflation the nominal anchor work.

Some economists believe that communicating the central banks' plans increases the monetary policy's effectiveness. The reason is that the information has an effect on what the public considers to be the intentions of the central bank and this can have consequences on inflation expectations. In turn, inflation expectations have consequences on inflation itself. Other economists are more skeptical about whether or not communicating the central banks' plans has any empirical effect on inflation (for an example, see Ball and Sheridan, 2003).

Within the inflation report, a communication strategy that has spread internationally is the fan chart. This graph communicates the central bank's central projection, the level of uncertainty and the risk related to the inflation forecast.

3. A forward looking operative procedure

Since there is a lag in the effect of monetary policy on inflation, monetary policy actions that are undertaken at a particular date have an effect on inflation several quarters later.

That is the reason why the inflation targeting strategy involves an operative procedure that consists of forecasting inflation into the future—including the effect of the policy actions—and comparing this projection of inflation with the target.

The main transmission mechanisms for monetary policy actions⁷ and the effects of different shocks that could have repercussions on inflation⁸ are generally formalized within a model or models of the transmission mechanisms for monetary policy. In the case of some central banks, those models communicate how the bank's board of directors officially understands the transmission mechanisms of monetary policy. On occasion, these models also make it possible for the board of directors to analyze the consequences that different shocks and policies have on future inflation.

IV. A BRIEF HISTORY OF MONETARY POLICY IN COLOMBIA

A. CONTROL OF THE MOVEMENT OF CAPITAL: 1966-1991

During the 1960s as international trade grew, capital flows between countries also grew. The controls on the movement of capital that prevailed during that era became less and less effective. Capital mobility put an end, in 1973, to the system of fixed exchange rates that had been created at the Bretton Woods conference in 1944.

In Colombia, the incipient movement of capital began to make the management of international reserves difficult. The Banco de la República recurrently found itself without international reserves thus producing exchange rate crises and devaluation.

The reigning philosophy was government interventionism and an effort was made to use international reserves to guide development. The solution to repeated

⁷ The transmission mechanisms or channels for monetary policy are: first, the aggregate demand channel through which an increase in the interest rate reduces the aggregated demand and reduces inflation. Second, the exchange rate channel through which an increase in the interest rate appreciates the exchange rate, reduces import inflation and reduces inflation. An appreciation in the exchange rate also reduces aggregated demand and also activates the aggregate demand channel. Third, the expectations channel through which an increase in the interest rate reduces inflation expectations (with rational expectations, expectations reduce because inflation itself diminishes throughout all of the channels) and the drop in inflation expectations reduces inflation itself.

⁸ Examples of these shocks are sudden increases in food price inflation, increases in the price of oil or large unexpected changes in capital flow.

exchange rate crises was not in the allocation of international reserves through price mechanisms (as was done by industrialized countries when they floated the exchange rates in 1973) but through control of the movement of capital.

Legislative Decree 2867, November 1966, and Decree 444, March 1967, established and regulated the control of capital movement. In addition, in order to prevent an exchange rate crisis from occurring again, the 1966 decree established that possession of international reserves by the public would be frozen, that only the Banco de la República could buy and sell international reserves and that those who violated this law would be penalized.

In regards to foreign investment, FDI was considered to have “suspicious” effects on the economic interests of the country and on national sovereignty. At the time, the policies related to FDI had names such as “policy for ‘shriveling’ foreign investment”, “policy for ‘Colombianization’ of the banking sector”, etc. The exchange rate statute required that a series of conditions be fulfilled before a FDI could be approved.

As of 1970, FDI was regulated by the Treaty of Cartagena that governs the Andean Pact. The philosophy of the Treaty was not much different from that of the statute. In practically all sectors of the economy, FDI was prohibited. New investments were prohibited in the financial sector and foreign capital in the financial sector was restricted to 20% (for an account of foreign investment in Colombia, see Urrutia, 1996).

B. LIBERALIZATION OF CAPITAL MOVEMENT IN 1991

Towards the end of the ‘80s, a change in mentality appeared that came to be called the Washington consensus. The new ideas favored market efficiency in the allocation of resources.

Capital mobility took place within the globalization of international investors and at a point of low interest rates in the United States. The developing countries were barely emerging into the global capital markets. Capital flowed to the emerging countries for the purpose of diversifying risk.⁹

⁹ The objective for capital flow at the end of the twentieth century was different from the purpose at the beginning of that century. Eichengreen (2004) shows how capital moved to countries such as Canada, Australia and New Zealand not to diversify risk but to foster development.

In Colombia, the new mentality, which was more in tune with the role of the market in the allocation of resources, contrasted with the capital controls that had been in effect since 1966. In 1991, the so-called ‘economic opening’ (*apertura económica*) established free capital mobility.

Act (Ley) 9, 1991, repealed capital flow restrictions, established that possession of and transactions with international reserves were not the exclusive right of the Banco de la República, but were open to all instead. It also decreed that the sale and purchase of foreign currency by the public should be done through intermediaries in the foreign exchange market. In addition, residents were able to freely get external financing.

Foreign direct investment was opened up even before the ‘90s. In 1987, Resolution 220 of the Treaty of Cartagena struck out the extensive list of prohibitions to FDI and increased the right to remit capital. Later on, Act 9, 1991, eliminated the National Planning Department’s permission and the limits to remitting capital and to capital reimbursements.

Colombia did not totally open up to capital mobility. Like Chile, it imposed a deposit on external debt (Resolution 21, 1993). The deposit would eliminate the possibility of carry over or international interest arbitrage. The deposit consisted of a given percentage of any external loan that had to be kept in the Banco de la República for a specified period of time and would not receive remuneration. According to Villar and Rincón (2000), the first purpose of this deposit was to help give the monetary policy “autonomy” since, due to the trilemma, if there is capital mobility, it is not possible to have monetary and exchange rate targets simultaneously. The second purpose for the deposit was to modify the maturity structure of external debt by replacing short-term debt with long term debt in order to, in theory, contribute to the country’s external resilience and prevent unexpected capital flights. The third purpose was to diminish the amount of external debt because, if the government was the guarantor (even if only implicitly) for the external obligations of the private sector, there would be an incentive to build up excessive debt.

The external debt deposit did not prevent a boom in external debt before 1999 nor the sudden capital flight in 1999.¹⁰ From 1991 to 1997 there was a huge inflow of

¹⁰ This evaluation of the deposit is somewhat strict since the purpose of the deposit was not to give capital flow complete stability. In any case, the deposit could not solve the trilemma of monetary policy.

capital and a boom in public and private debt. In 1998 there was a large, unanticipated flight of capital —one of the so-called “sudden stops”—.

C. *THE TRILEMA AND THE MONETARY REGIME*

It is difficult to summarize the trilemma of monetary policy and the strategy for monetary policy management since 1996 in one paragraph. However, it can be attempted as follows. The decision was to conduct monetary policy within the framework of an anchor that was a hybrid between monetary and exchange rate anchors and which would gradually give greater exchange rate flexibility. In other words, there was no capital mobility in the ‘70s. There was a little more (*de facto*)¹¹ in the ‘80s, and complete capital mobility in the ‘90s. Finally, in the first decade of the new millennium, monetary policy began to work within the framework of the inflation targeting regime with capital mobility and central bank intervention in the foreign exchange market.

As noted previously, hybrid monetary regimes like those that Colombia implemented before 1999 are not very transparent and are difficult to understand even for those who are entrusted with carrying out monetary policy. Due to the lack of transparency in monetary policy and the difficulty in understanding it, hybrid regimes are characterized by a high degree of discretion in decision-making. Monetary policy revolved around the dilemmas posed by a hierarchy of instruments and a hierarchy of goals and not around how to reduce inflation.

D. *A QUARTER OF A CENTURY OF GRADUALISM AND MODERATE INFLATION: 1973-1998*

From the time that the crawling peg was established, and given the effect of the nominal exchange rate on the real exchange rate in the short run, the monetary policy makers and interest groups thought that management of the nominal exchange rate would be a development policy. Mini-devaluation had its origin in a philosophy of import substitution (protection) and preferential treatment for exports.

¹¹ In spite of the prohibition against speculative capital mobility, capital movement occurred through fictitious prices for exports and imports.

During the '70s and '80s Colombia did not have the hyperinflation that other countries in Latin America experienced. However, and unfortunately, it did not fight the inflation that began in the seventies either. Instead it resigned itself to a quarter of a century of what came to be called “moderate inflation”: 1974-1998.

The strategy of monetary policy was not to try to reduce inflation. Instead, accepting an inflation projection as exogenous, the strategy was simply to provide the liquidity that would be necessary taking the inflation projection as exogenous. Thus the monetary strategy perpetuated past inflation. The goal of monetary policy could be summarized in the following statement: “the stance of economic policy in Colombia has been defined in the context of the global objective which has been to maintain moderate inflation, in the 20%-30% range” (Carrasquilla, 1998:87; quoted in Mishkin and Savastano, 2002).

E. MONETARY MANAGEMENT PRIOR TO THE CRISIS OF 1999

Upon analyzing the relative width of the monetary corridors and exchange rate bands in the nineties, it can be seen that the corridor of the monetary base was $\pm 3\%$ usually with a drift at the end of the year and the exchange rate band had a width of $\pm 7\%$ —also with realignments—. Given the relative width of the corridors and the progressive flexibility of the exchange rate, it is my point of view that in the nineties, the framework worked mainly as a monetary strategy.

At the beginning of the nineties, the countries that pioneered the strategy of inflation targeting had already adopted this regime. They were New Zealand, Canada, and the U. K. The strategy of inflation targeting only came to be adopted by a larger number of countries after the sudden stops which occurred in 1996-1997 in Asia and in 1997-1998 in Latin America.

In its *Report to Congress* in 1996, the Banco de la República announced that monetary policy would be implemented on the basis of an inflation targeting regime. However, this announcement was for the future since the monetary policy continued to be managed within the framework of a monetary strategy.

There are two reasons why the framework prior to the 1999 crisis could not be considered inflation targeting: first, the bank understood inflation to be a monetary phenomenon; second, it did not use a forward looking operative mechanism that

would contrast inflation with its target. Indeed in the earliest *Inflation Reports* the cause of inflation is the growth of money.

There were corridors for the monetary base and for M3 plus bonds.¹² The monetary base and M3 plus bonds corridors were built by means of a demand for money or through the quantity theory of money and related to each other through reserve requirements. In 2001 the corridors were replaced by reference lines. According to Hernández and Tolosa (2001) if the monetary base deviated from its line of reference, the Banco de la República could move the intervention band for interest rates until said deviations were corrected or not move it at its own discretion. In the case of a conflict between the corridors or the reference lines of the two monetary aggregates, the solution was discretionary and it was also necessary to “take a look” at the inflation forecast. Apparently the “look” was taken only in the case of conflict between the projections of the monetary base and the M3 plus bonds and, in any case, the “look” did not imply a systematic response of monetary policy nor a forward looking operative procedure.

*F. THE CRISIS BEFORE THE ADOPTION
OF INFLATION TARGETING: 1998-1999*

At the end of the century and just like other countries, Colombia found itself in the middle of a sudden stop that caused the monetary authorities to redefine their strategy for monetary policy management. During the international financial crisis of 1998, various countries tried to defend their systems of exchange rate bands by increasing interest rates but later floating the exchange rate.

The international crisis of 1998 found Colombia in a vulnerable situation. The government debt had been growing since 1991 because the new national Constitution had placed additional responsibilities on public expenditure without giving due attention to fiscal balance. In spite of successive tax reforms, the situation got worse due to the huge increases in public expenditure.

After the moratorium in Russia, international investors withdrew their investments from various emerging countries. The spreads for the emerging countries' debts

¹² Some years there were corridors for M1.

increased. The increase in the spreads in Colombia was some 500 base points, but countries such as Brazil and Venezuela experienced even greater increases.

As in other countries, the response of monetary policy in Colombia was to try to keep the crawling band system by, first, intervening in the foreign exchange market with international reserves and, second, increasing the interest rates. The higher domestic interest rates brought about the collapse of internal credit and made the fragility of the financial system evident. Not only the sudden stop but also the response of monetary policy which, at the time, was common practice internationally, was reflected in an unprecedented fall in output. In 1999 the drop in GDP was -4.2%. Although the recession had already begun to develop in 1998 due to a variety of factors among which a drop of 27% in the price of coffee should be emphasized, in our view the most important factors for explaining the enormous recession in 1999 were financial.

The Niño phenomenon of 1998 doubled food price inflation from 16.4% in December, 1997, to 30% in June, 1998. The lagged response in the supply of food reduced food price inflation to 15.6% in December, 1998. As a result of the volatility of food price inflation, total inflation increased from 17.6% to 20.7% in June, 1998 and collapsed to 16.7% in December, 1998. The volatility of inflation could not be a larger problem than the capital flight and the effect of the high interest rates on financial stability, but the effect of the Niño phenomenon on inflation shows what supply shocks can do to inflation.

In 1999 money increased far below the monetary corridor. The exchange rate band was made wider and also depreciated. The interbank interest rate jumped above the intervention band for interest rates and inflation was 5.6 percentage points below the forecast. It was time to redefine the monetary policy regime.

G. ADOPTION OF INFLATION TARGETING: 1999-2001

The capital flight disciplined a monetary strategy that had tried to maintain monetary corridors and exchange rate targets. During that period, the International Monetary Fund (IMF) made it clear that capital mobility did not allow room for anything but corner solutions: fixed or floating (this is Fischer's, 2001, "bipolar view"). The exchange rate had been made progressively more flexible during the nineties and, in 1999, the option that was chosen was to float.

Within the floating exchange rate regime, two options for the internal nominal anchor were left —monetary strategy or inflation targeting—. Monetary strategy did not offer a good possibility for nominal stability due to the instability in money demand. The strategy of inflation targeting had growing international acceptance including that of the IMF, the organism with which the country was beginning an extended-fund-facility program.

During the first of four consecutive agreements signed with the IMF, important elements of the strategy of inflation targeting were consolidated. As was stated by the then governor of the Banco de la República, “the day the Fund approved the adjustment package, it was possible to float the exchange rate...” (Urrutia, 2002:15).

Within the IMF program, multi-annual inflation targets were established. In 2001 the Banco de la República implemented a forward-looking operative decision process and began to define the band for interest rate intervention on the basis of the difference between the inflation forecast and the target.

The first monetary target within the program set up with the IMF was for a monetary aggregate and consisted of a ceiling to the growth of net domestic assets for the year 2000. In 2001 this performance criteria was replaced by a series of quarterly inflation targets and the monetary corridor was replaced by a reference line.

The first agreement with the IMF defined multi-annual inflation targets of 10%, 8%, and 6% for the end of 2000, 2001 and 2002. These inflation targets were not the reason for the increase in interest rates in 1998-1999 since those targets had not existed prior to the IMF program. The increase in the interest rates in 1998-1999 was due to the defense of the exchange rate band during the capital flight in 1998 and the sudden stop in 1999. Not only the sudden stop but also the response of monetary policy to the sudden stop —the increase in interest rates to defend the exchange rate band— forced these ambitious inflation targets to be rigorously fulfilled except in 2002 when the inflation target was marginally fulfilled since core inflation, excluding food prices, was 6.5%.¹³

¹³ For more information about the effects of the sudden stops on economic activity see Chari, Kehoe and McGrattan (2005) and for the effects of monetary policy on economic activity during a sudden stop see Gómez (2006b).

It has been said that man remembers the future and imagines the past. Although monetary policy was managed based on a hybrid strategy until 1999, ever since the strategy of inflation targeting was established in September, 1999, some economists have begun looking back to seek the origins of the inflation targeting strategy in the past. At the beginning of the first decade of the new millennium, it was common to see international studies in which countries were ranked on the grounds of which one had been the first to have some of the elements of this strategy.

At the beginning of the nineties, the inflation targeting regime had been implemented, as was already mentioned, in New Zealand, Canada and England. Looking back, four elements that are characteristic of this regime were introduced in Colombia throughout the nineties.

First, in 1991 the new national Constitution assigned the management of monetary policy to the board of an independent central bank and gave it the goal of defending the “purchasing power of the peso”.

Second, in 1997 an intervention band for interest rates was established for the interbank interest rate with an initial margin of 20 percentage points that would later grow more and more narrow. Over time, the floor and the ceiling of the band would become the intervention rates that would move based on the inflation forecast. When the band was introduced, the objective was simply to give the interest rate some stability. Initially, the purpose of turning the monetary policy instrument around did not exist.

Third, models were used to forecast inflation. However, these models did not draw a relationship between the instrument and the goal of monetary policy in the future. They were simply single equation models for forecasting inflation.

Fourth, in December 1998, the first inflation report that explained the evolution of inflation and its causes was published. As said above, the cause of inflation according to the first report was the growth of money.

Upon looking at these elements retrospectively, it is difficult to assert that the inflation targeting regime had been implemented in Colombia as of 1991 and that the transition to the strategy of inflation targeting was gradual. In my opinion, it is difficult to agree with this point of view since the factors that led to the change in

the monetary regime were the movement of capital and the obvious crisis in the hybrid regime prior to 1999 that had not satisfactorily solved the trilema.

H. THE PERIOD OF INFLATION TARGETING: 2001-

In 1999 the Banco de la República allowed the exchange rate to float and in 2001, it made it explicit that the projection for the monetary base was only a reference indicator. In addition, it set the width of the intervention band for interest rates at one percent and began to determine the interest rate based on a forward looking operative mechanism which was based on the inflation forecast and on the transmission mechanisms of monetary policy. In 2001 monetary policy in Colombia operated within the framework of an inflation targeting regime.

During the second half of 2002, the spread on foreign debt increased and with this increase, the exchange rate depreciated. The phenomenon was global and associated with the crisis of large accounting companies and companies that they did consulting for such as Enron and WorldCom. The crisis in accounting practices brought about a lower appetite for risk on the part of international investors and an international movement of capital away from emerging markets and towards so-called “safe heavens”.

The Banco de la República intervened in the foreign exchange market but focused their handling of interest rate policy on what would happen in the medium term after the shock. As a result of this medium term decision horizon, interest rates did not increase as much as they did, for example, in Brazil. This country experienced a similar situation due to the lower appetite for risk on the part of international investors and also due to the higher perception of country risk as a consequence of the electoral possibilities for the then leftist candidate and later, president.

During the second half of 2004, the tolerance of international investors for risk rose and international capital returned to emerging countries. The exchange rate appreciated and the Banco de la República defended the exchange rate by strongly intervening in the foreign exchange market. The Banco de la República showed that intervention in the foreign exchange market, which supposedly did not work according to academic studies, is an effective instrument for controlling the

exchange rate.¹⁴ The purchases of international reserves on the part of the Banco de la República served later to make pre-payments (the so-called debt buy back) on the foreign debt of the central national government.

V. ELEMENTS OF THE INFLATION TARGETING STRATEGY IN COLOMBIA

A. THE INFLATION TARGETS

During the nineties, the inflation targets in Colombia were point targets and worked more like a forecast within a program of macroeconomic consistency, like in an IMF's macroeconomic programming exercise, than like an overriding goal of monetary policy as is the case in the inflation targeting regime.

Ever since the beginning of the first decade of the new millennium, the targets have been a combination between a point target (a number such as, for example, 6%) and a range (for example, between 5% and 7%). They were biannual targets that consisted of a point target for one year ahead and a range target for two years ahead. For the second year, the point target had to be within the target range established the previous year. Later on the multi-annual targets were ranges for either one year or two years ahead.

Besides the short term inflation targets, the Banco de la República established a long term inflation target that, at the beginning, was a point target of 3% and today is a range target of 2% to 4%. A long term inflation target is generally set at a level of inflation that can be considered price stability without being so low that, as in the case of Japan, it becomes difficult for the monetary policy to be expansionary or exposes the country to the risk and the cost of deflation.¹⁵ At the middle of the first decade of the new millennium, the short term inflation targets continued moving towards the long term inflation target.

¹⁴ Empirical studies do not give much support to exchange market intervention since they have been done for countries where intervention is small compared to the position of domestic and international assets of the private sector.

¹⁵ López (2006) presents some criteria that may guide the decision on the long term inflation target.

In Colombia the targets are defined on the basis of the consumer price index (CPI). This index includes a component with high volatility and, therefore, low predictability —the food price index—. In the case of Colombia, the index for food prices is 29% of the CPI. As was mentioned previously, a reduction in food supply as a consequence of a change in weather patterns could move CPI inflation some three percentage points above the initial level in a year and some three percentage points below the initial level in two years.

Due to the volatility of the CPI, a layman could think that fulfilling inflation targets is difficult. Nevertheless, the Banco de la República opted for establishing targets for CPI inflation based on the criteria of simplicity and clarity. When there are sudden changes due, for example, to unanticipated changes in the price of food, the bank explains that these changes are due to changes in weather patterns that typically affect crops, but that they do not affect the achievement of the inflation objectives in the medium and long term.

B. COMMUNICATION STRATEGY OF THE BANCO DE LA REPÚBLICA

The Banco de la República's communication strategy is based on press releases, the *Report to the Congress*, the *Inflation Report*, and presentations made by the highest ranking bank officials to the general public.¹⁶

As we said previously, another one of the characteristics of the inflation targeting strategy that is related to transparency is accountability —being held accountable to someone—. In Colombia the Banco de la República presents a *Report to the Congress of the Republic* twice a year and makes the inflation report available to the general public four times a year.

C. A FORWARD LOOKING CENTRAL BANK DECISION PROCESS

The Banco de la República's decision process is forward looking and includes a group of inflation projection models and a core model.¹⁷ The projection models,

¹⁶ Currently, the Governor of the Banco de la República gives a quarterly presentation on inflation on national TV.

¹⁷ The forecasting and policy analysis system may be consulted in Gómez, Uribe and Vargas (2002).

just like the core model for projection and analysis are a matter for constant development and for this, the bank has a group of specialized professionals. More informed projections of inflation and of economic activity one or two quarters ahead are exogenously incorporated into the projections of the core model.

The mechanism for the transmission of monetary policy to inflation begins with the bank's intervention rates, the expansion and contraction repo rates, which in Colombia are also known by the names "repo and OMA rates" or "deposit and lending rates".¹⁸ The interbank rate, which is the rate for very short term bank to bank loans, fluctuates between the expansion and contraction repo rates and transmits the policy decisions to the rest of the interest rates in the economy.

D. INTERVENTION IN THE FOREIGN EXCHANGE MARKET

Although intervention in the foreign exchange market is not on the list of characteristics of the inflation targeting strategy, it is quite generalized in the banks that implement monetary policy by means of this strategy (see for example, Ho and McCauley, 2003).

In Colombia the central bank uses three methods to intervene in the foreign exchange market. The first method is discretionary. The other two follow predetermined rules.

The first method of intervention is discretionary in regards to the amount of the intervention and the rate at which the intervention is made. This is the method that has been used the most, especially during the period of capital inflow which began in the second half of 2004 in order to prevent the exchange rate from appreciating. This type of intervention is discretionary and is not implemented through rules.

The second type of intervention is called accumulation or de-accumulation of reserves. It is used by the Banco de la República mainly during those periods in which it wants to gradually accumulate international reserves. This method has

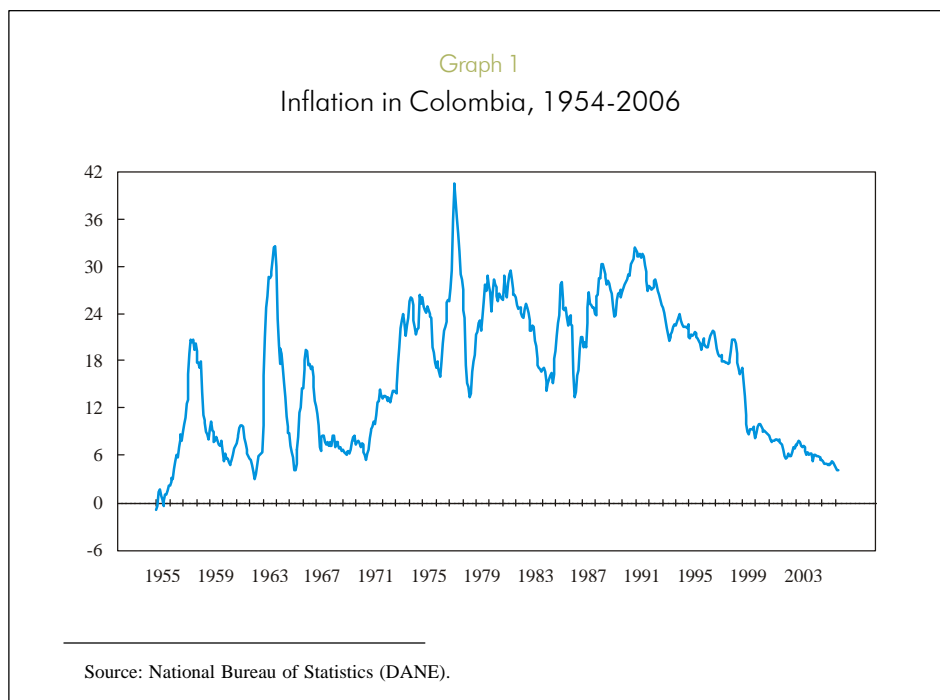
¹⁸ A repo transaction is the sale of a security for cash with the commitment to buy it back in the future. The security becomes a guarantee of what is actually a risk-free cash loan. The repos can be done for different periods. The Banco de la República mainly intervenes in one-day repos.

been utilized to de-accumulate reserves only very rarely. This type of intervention is defined by a rule that requires that the central bank buy international reserves when the exchange rate is below the average for the last twenty working days.

The third type of intervention is that of the control of volatility. This method of intervention also follows a rule. According to this rule, the bank buys international reserves when the exchange rate is below the moving average for the last twenty days minus four percent and sells reserves when the exchange rate is above the moving average for the last twenty day plus four percent. The amount of the intervention is also determined by auction.

VI. THE RESULTS: THE EVOLUTION OF INFLATION IN COLOMBIA

Inflation was in the double digits (23.5%) during practically the entire last quarter of the past century (Graph 1). This is the world record for “moderate inflation”.



The only parallel is that of India where moderate inflation was lower at 9%.¹⁹ Why did inflation stay in the double digits for such a long period of time? It appears that since inflation was never as high as it was in other Latin American countries, it was not considered to be a serious problem. The country developed indexing plans through which it learned to tolerate inflation. As was mentioned previously, the goal of monetary policy was not to lower inflation but to maintain inflation at those levels.

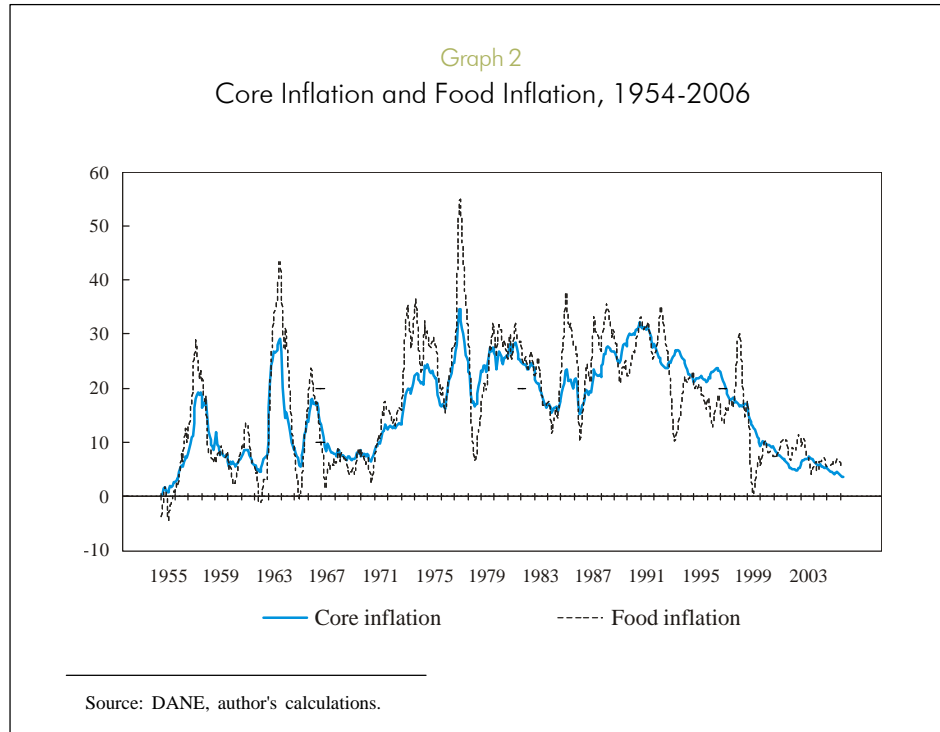
While inflation in Colombia was relatively low during the seventies and eighties in comparison with the hyperinflation in other countries in Latin America, inflation fell during the nineties in the majority of the developing countries. Towards the middle of the nineties, it became evident that Colombia was a case of relatively high inflation.

The stabilization of inflation in 1999 was not anticipated. The central bank's inflation forecast for the end of 1999 was 15% and the result was 9.2%. Although the bank had wanted to diminish inflation gradually during the nineties, the disinflation was rapid as a result of the sudden stop in 1998-1999 and the size of the drop in output.

A transitory phenomenon made the drop in inflation seem to be more dramatic: the increase in food price inflation in 1998 as a consequence of the Niño phenomenon and the reduction in food price inflation in 1999 as a consequence of the lagged response in the food supply. The effect of the recession on core inflation and the drop in the inflation of food prices caused a fall of 7.5 percentage points in the CPI inflation at the end of 1999 (graphs 1 and 2).

One digit inflation at the beginning of the 21st century was something that had not happened in Colombia since 1971. At the beginning of the seventies, inflation also increased surprisingly because of a combination of factors similar to the factors that caused a drop in inflation at the end of the nineties, but on that occasion, they operated in reverse. At the beginning of the seventies, an expansionary phase in economic activity, an increase in the inflation of imported goods and a shock in food supply raised inflation to the double digits (graphs 1 to 5).

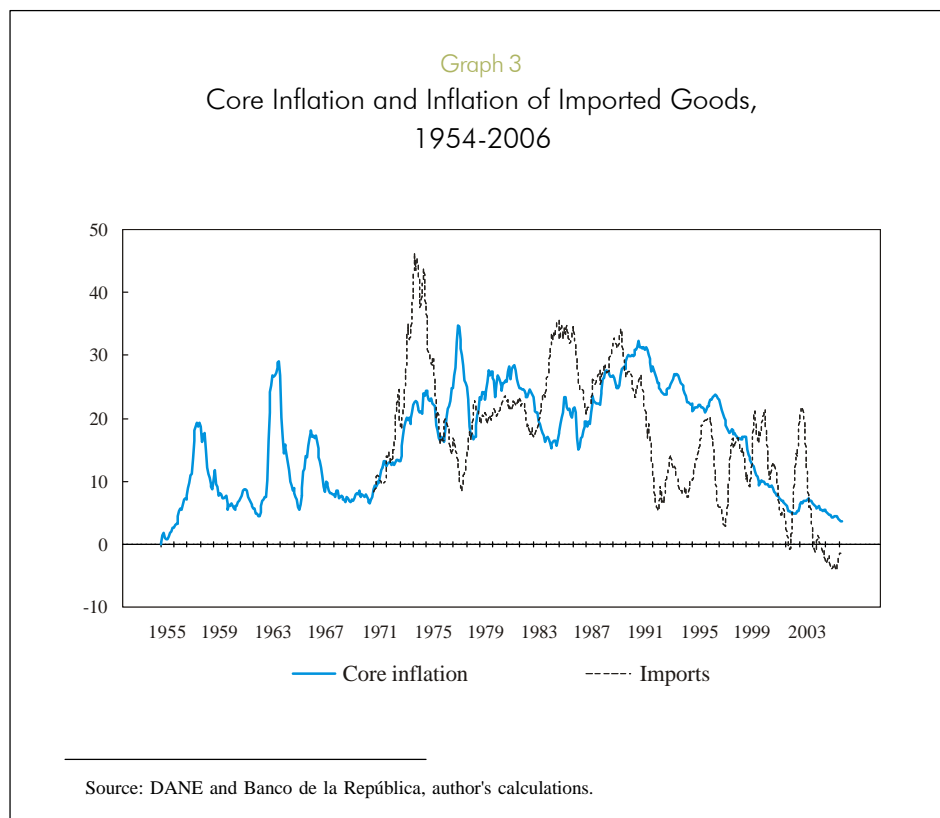
¹⁹ The average inflation in these countries corresponds to the 1973-1999 period.



Inflation dropped in 1983-1984 due to the recessive phase of the cycle, a recession that coincided with an international recession and the debt crisis. Nevertheless, a supply shock in the food supply and devaluation within a program with the IMF brought back an increase in inflation in 1985-1986 (graphs 1 to 5).²⁰

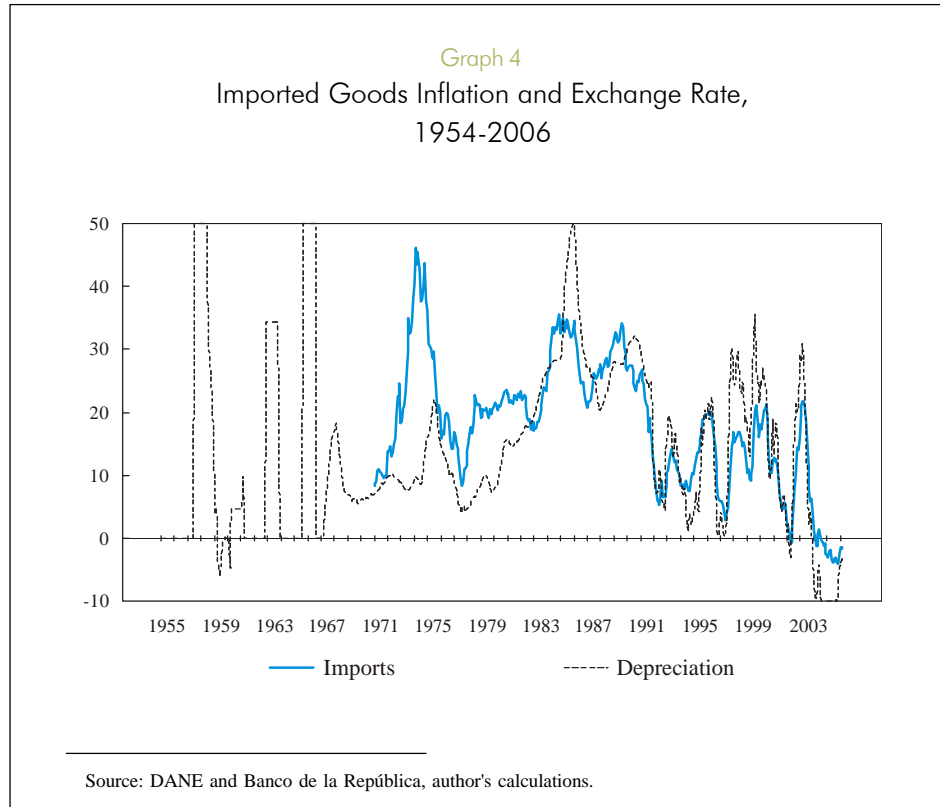
The 1985-1986 increase in inflation could have been transitory and the reduction permanent but, as previously noted, those entrusted with formulating monetary policy thought that inflation in Colombia would perpetuate itself within a range of 20% to 30%. Therefore, monetary policy did not try to impede inflation from

²⁰ At the beginning of the seventies, inflation increased as a result of demand pressures (a positive output gap), an increase in food price inflation (from 4.3% at the end of 1970 to 31% at the end of 1973) and an increase in the inflation of the price of imports (from around 8.4% at the end of 1970 to 37.9% at the end of 1973). In 1985 inflation did not fall in spite of the negative output gap due to an increase in food prices (from 17.2% at the end of 1983 to 37.8% in mid-1985). The increase in the prices of imported goods at the beginning of the seventies was due to higher international inflation and, in 1985, to the higher devaluation (see graphs 1 to 5).



remaining within this range for the rest of the eighties. The expansionary phase of the cycle and the relatively high rate of devaluation would cause increasing inflation until it reached 31.6% in 1991.

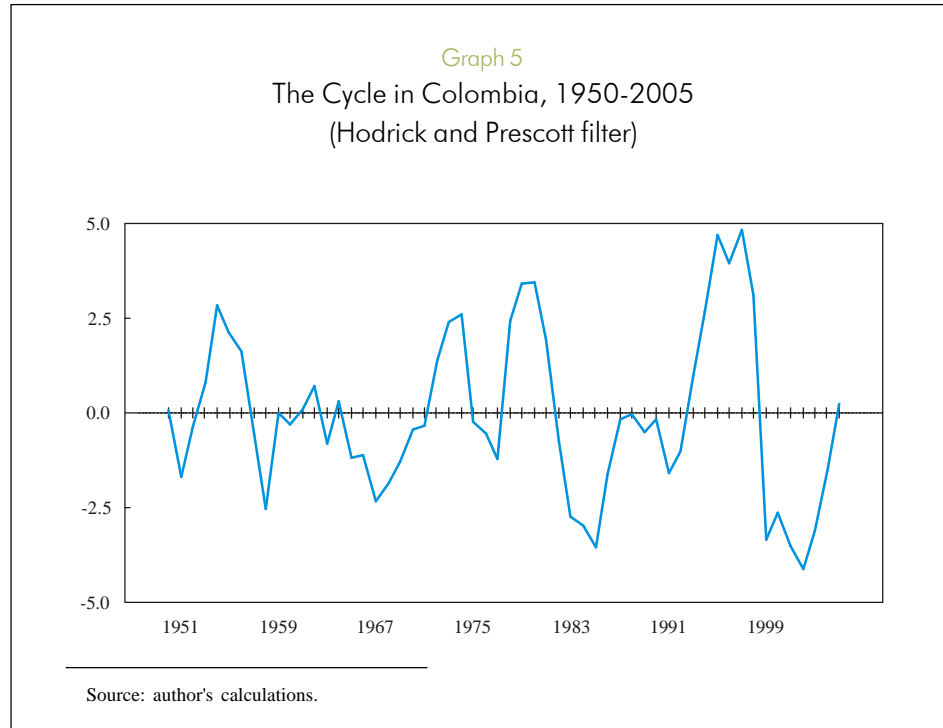
In the future, it is possible that inflation will continue to have sudden changes in the short term as has happened throughout history. And even though there was a change in the nominal anchor, the changes in inflation in the short term will be explained, as they were in the past, by changes in the inflation of food prices, in the exchange rate and in the economic cycle. If the inflation targets are a stringent constraint on monetary policy—especially the long term inflation target of which 3% is the midpoint—, they will give the economy a nominal anchor, complete the transition to the long term goal and prevent transitory shocks from raising inflation to double digits as they did at the beginning of the seventies.



VII. FINAL COMMENTS: THE INFLATION TARGETING STRATEGY IN COLOMBIA IN THE FUTURE

A. FROM CRISIS TO CONSUMPTION BOOM

International capital mobility offers the emerging countries many possibilities and also poses some challenges. When there is a capital inflow, like there was in the middle of the first decade of the new millennium, two phenomena are created. The first one is a capital inflow that tends to appreciate the exchange rate. The appreciation of the exchange rate tends to transitorily reduce inflation in the short term. The second is the inflow of capital that tends to increase consumption and output. In the absence of increases in interest rates, the increase in demand tends to increase inflation more permanently in the medium term.



At a time of capital inflow like the one in the middle of the first decade of the millennium, the central bank maintains its objective of keeping inflation on target. This requires a conservative policy that restrains demand and inflation.

In contrast, when capital leaves, there are two alternative policies. The first is to act opportunistically and allow a reduction in inflation. As has been said, this seems to be one of the main causes of the significant fall in inflation that was almost 6 percentage points in 2000-2002. However, if inflation has already been brought down to its long term level, the bank may allow the exchange rate to float and the outflow of capital to stimulate economic activity through the growth of net exports.²¹

²¹ To study how a sudden stop can stimulate output see Chari, Kehoe and McGrattan (2005) and Gómez (2006).

B. INFLATION TARGETING AND EXCHANGE RATE INTERVENTION

The strategy of inflation targeting with exchange rate intervention is practiced quite generally (Ho and McCauley, 2003) and has even been strongly defended by some economists (see, for instance, Goldstein, 2002). When capital enters, the central bank buys international reserves thus reducing the supply that is available to the private sector. This supports the exchange rate. When capital leaves, the central bank sells international reserves to prevent the exchange rate from depreciating.

The Banco de la República succeeded in supporting the exchange rate during the second half of 2004 when capital started coming in. One of the important aspects of this intervention is that it could cause the money supply to grow to such an extent that, from the point of view of the monetary strategy, it would be inflationary. Is this money growth inflationary? No, because if the strategy of monetary policy management is inflation targeting, the anchor for inflation is the inflation target and not the money supply. The risk is that the inflation targets may weaken as a consequence of central bank intervention and monetary expansion. More concretely, the risk is that the inflation targets become endogenous to inflation projections which would accommodate the money growth that is necessary for exchange rate intervention. In the long run, inflation will move towards wherever the anchor is the most restrictive whether it is the growth of money or the inflation target. The regime for the formulation of monetary policy will be, depending on the case, inflation targeting or a monetary framework.

C. FOOD PRICE AND CORE INFLATION

Large changes in CPI inflation that are caused by food price inflation are transitory. The Banco de la República would rarely move the interest rate in response to changes in food supply since that policy would transmit the volatility of the food supply to the entire economy.

The relevance of food price inflation is that an increase in it could bring about large and permanent increases in inflation, especially if it is accompanied by an increase in the exchange rate. If this affects the central bank's willingness to restrain inflation, inflation could permanently return to a higher level. The key mechanism in this transmission chain is the effect of inflation on the central bank's

inflation target. A large increase, even if it were transitory, in inflation could become a permanent increase if the central bank lowers its guard in regards to defending price stability.

D. TWO RISKS OF AN INFLATION SPURT

As said previously, the transmission mechanisms by which inflation increased at the beginning of the seventies and also the mechanisms through which inflation did not diminish in 1985 in spite of the recession in economic activity were: demand pressure, shocks to inflation in the price of imports and shocks to food price inflation.

All things considered, the permanence of double digit inflation after the recession and debt crisis in 1984-1985, as Milton Friedman said, was due to the fact that the results of monetary policy are a consequence of the way those who are entrusted with formulating economic policy think. That is why, during the rest of the eighties, monetary policy did not attempt to reduce inflation from the 20% to 30% range.

In the future it is possible that inflation will continue to have large, unexpected changes in the short term as it has in the past. And, although today, the monetary policy regime is different and the emphasis on the inflation target, explicit, in conclusion it may be mentioned that there are two latent risks of a permanent inflation increase. The first risk is an increase in food price inflation and in the exchange rate that could change the long term inflation target of the Banco de la República. The second one is a capital inflow that increases demand and inflation and that could change the inflation target of the Banco de la República. If the long term inflation target is weak, sooner or later Colombia will return to higher inflation. If the target is a commitment, the inflation targeting regime will give the economy a nominal anchor and the Banco de la República will complete the transition to the long term target which 3% is the midpoint of.

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