Inflation Targeting: Lessons from the Greenspan Era

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Abstract

The paper discusses recent events concerning the conduct of US monetary policy which are being interpreted as significant steps towards the adoption of an inflation targeting regime, or even as a *de facto* adoption of such a system. For this purpose, after a brief introduction, the central concepts of the inflation targeting system are presented, relevant aspects of US monetary policy as from the 70s are recalled, and recent events (2004-2005) as to the conduct of monetary policy and macroeconomic performance are detailed. The paper gives special emphasis on representative views held by opposing (Greenspan) and favouring (Bernanke) cases regarding the adoption of the inflation targeting system as a form of conducting the US monetary policy. The central conclusion of this paper is that the Fed, despite the fact that it has moved towards proving economic agents with a greater transparency and with more information on its actions, has not, in fact, adopted an inflation targeting policy. And even if it were to adopt such a policy in the future, this would take place despite theoretical arguments and empirical evidence to the contrary, given the favourable results obtained in the conduct of a more discretionary and flexible monetary policy in the USA as from the mid-80s.

Key words: inflation targeting, central banking, monetary policy

JEL Classification: E52, E58

1) Introduction

The debate surrounding economic policy in Brazil has in the conduct of the country’s monetary policy one of its major points of interest, which does not necessarily mean that the debate itself has been interesting. But why is this so? Because however much criticism one can identify as to the conduct of monetary policy in the form it is being carried out, such criticism is mostly focused on the

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manner this policy is implemented and less on its underlying conception. To reduce the field of criticism to the merely operational aspect – which has, of course, its interest but is far from representing the entire issue at stake – limits the debate, makes it lose its brunt, and is not capable of pointing out alternatives.

There are abundant examples as to how the discussion on the monetary policy is very limited. Recently, for instance, special notoriety in the debate was attracted by an intervention of the current chairman of the Central Bank of Brazil,[2] in which he obviously defends the conception and the implementation of the monetary policy he is responsible for. In his reply to what the critics consider to be a very "tight" policy, he replies that the growth rate of Brazilian economy in 2004 amounted to 5.2%, and that this evidences the result of a process in which fundamental problems of the country are being gradually overcome.

On this matter, it is worth mentioning that the growth experienced during the period derived from external factors; that is, the Brazilian economy grew despite its current economic policy.[3] In 2004, the world economy growth rate was about 5%. If we compare the Brazilian growth rate of the same year with that of other so-called emerging economies, such as Argentina (8.8%), China (9.5%), India (6.4%) and Russia (7.3%), one will notice that the performance of Brazilian economy was very discreet.

But besides the obvious justification of his policy, what draws one's attention in the interview are the following highly questionable assertions concerning the inflation targeting system: (1) that it is the best alternative for conducting monetary policy, (2) that it represents the most advanced concept in the field of economic science, (3) that experience proves it to have been very efficient in the countries that have adopted such a system. The answer to this last assertion is simple, direct and can be given outright: the literature that evaluates the empirical evidence arising from the experience of countries that have implemented inflation targeting does not provide for conclusive statements as to the efficiency of this approach.

An important reference is Ball & Sheridan (2003). The most general conclusion offered by these authors is that there is no conclusive evidence in support of the statement that inflationary targeting contributes to an improved performance of countries which have adopted it in terms of inflation behaviour.

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[2] See Meirelles (2005), an interview to the Brazilian magazine *Veja* ("Yellow Pages").
[3] For an assessment of the economic growth during this period, see, e.g., Belluzzo & Carneiro (2004, p. 7).

Arestis & Sawyer (2004, pp. 53-56) also offer a critical evaluation of the empirical literature that would support the efficiency of the inflation targeting system. The authors discuss some studies which, by means of econometric tests, seem to support the inflation targeting system (see, e.g. Neumann & von Hagen, 2002), criticize their results and demonstrate the weakness of the alleged evidence they present. Basically, their criticism are the following: (1) the 1990s were a period of low inflation in almost all countries, not only in those which adopted the inflation targeting system; (2) even central banks that do not adopt this system – e.g. the Federal Reserve or the European Central Bank – have retained their credibility and reputation, and do not seem to have incurred in relatively higher costs in order to attain their goal of stabilizing the economy, and (3) certain countries that have had a "successful" experience with inflation targeting were already on a low inflation path before adopting the system.[4]

The reply to the statement that inflation targeting is the best and most advanced alternative for conducting monetary policy can be given based on how it is applied in a concrete case. For this reason, one may and must ask: how is monetary policy conducted in the more advanced countries? If the statement of the chairman of the Central Bank of Brazil were correct, advanced countries would either operate with inflation targets or, at the very least, would be on their way over to such a system. Is this, in fact, the current scenario? Once the discussion of a particular case is completed, one might want to inquire: how is monetary policy conducted in the United States?

This question could be replied to in very few words: the US monetary policy is conducted in a discretionary manner – i.e., it is conducted under the judgement and discretionary power of the Federal Reserve System. In other terms, monetary policy is not conducted solely to reach an explicit and previously stated inflation target within a given period of time.

There is, however, an important ongoing debate in the USA concerning the convenience of the monetary policy, currently of a more discretionary nature, being replaced by an inflation targeting policy. More that that, recent procedures adopted by the Fed have been interpreted by some analysts as indication that the institution will be adopting an inflation targeting system some time in the near future. If this process is or not in the course of being implemented, and whether or not it is

[4] For a study highlighting the favourable results following the adoption of inflation targeting, see Wu (2004).

pertinent, are issues that will be evaluated in detail in the course of our argumentation.

This text is structured as follows. Following this Introduction, in Section 2 we present a brief discussion of the inflation targeting system. Section 3 reviews the conduct of monetary policy in the USA from the mid-70s up to the beginning of the current decade. Section 4 scans more recent trends (2004-2005) of monetary policy, as well as the views for and against the adoption of the inflation targeting regime, leading up to our closing remarks.

2) The Inflation Targeting Regime: Preliminary Remarks

The conventional justification for an explicit adoption of targets for monetary policy – whether an "old" target, of the monetarist type, which established a growth rate for a given monetary aggregate, or a "new" target, which defines a growth rate for prices – is what ensures *credibility* to the monetary authority.

Bernanke et al. (1999) define the inflation targeting system as a strategy of monetary policy based on the public announcement of an inflation rate target (or interval) for a given time perspective and the explicit acknowledgement that low and stable inflation ought to be the main long term goal of monetary policy. Having accepted the conventional (Neo-Classical) thesis that monetary policy is inefficient in the long run, as well as the need for low inflation so as to ensure an adequate functioning of the economic system, Bernanke et al. (1999) propose that the inflation targeting system is the best form for conducting monetary policy. Essentially, there are two reasons that would entail this being the best strategy: (1) an improved communication between the public and monetary authorities, thus increasing the ability of the former to predict future inflation, and (2) the discipline imposed on government with respect to monetary policy, thus ensuring that it will attain a greater credibility.

The authors warn that the inflation targeting system should be treated more as a "strategy" or as a "framework", and less as a rule, since an inflation target cannot be reached by means of a specific recipe. Essentially, for these authors all monetary policy systems are, in one way or another, discretionary, and what varies is the degree in which discretionary power is wielded (Bernanke et al., 1999, p. 6). In this sense, when one adopts an inflation target system, discretion action would operate

out from a more articulate framework, in which “the general and the tactical goals” of the policymakers would be explicit in advance. The authors designate this approach “constrained discretion”:

> *By imposing a conceptual structure and its inherent discipline on the central bank, but without eliminating flexibility, inflation targeting combines some of the advantages traditionally ascribed to rules with those ascribed to discretion* (Bernanke et al., 1999, p. 6; italics in the original).

According to Bernanke:

> Constrained discretion attempts to strike a balance between the inflexibility of strict policy rules and the potential lack of discipline and structure inherent in unfettered policymaker discretion. Under constrained discretion, the central bank is free to do its best to stabilize output and employment in the face of short-run disturbances, with the appropriate caution born of our imperfect knowledge of the economy and of the effects of policy (this is the “discretion” part of constrained discretion). However, a crucial proviso is that, in conducting stabilization policy, the central bank must also maintain a strong commitment to keeping inflation--and, hence, public expectations of inflation--firmly under control (the “constrained” part of constrained discretion). Because monetary policy influences inflation with a lag, keeping inflation under control may require the central bank to anticipate future movements in inflation and move preemptively. Hence constrained discretion is an inherently forward-looking policy approach (Bernanke, 2003, p. 2).

But why would the adoption of this regime ensure greater credibility to the monetary authority and would reduce the costs of its policy, i.e., the negative effects on production and on employment of a policy which attempts to reduce/control inflation? For its defenders, a public announcement of an inflation target, to be strongly pursued, would affect the expectations of the agents and thus give a decisive contribution to its achievement. Supposing the monetary authorities have a convincing history of fighting inflation (i.e., hold credibility), as from the time they inform they will adopt a tighter policy, agents will accordingly reduce their inflationary expectations. In this sense, credibility would reduce the cost of an anti-inflation policy.

What experience with inflation targeting has accrued up to the present day from which we might extract relevant lessons? New Zealand pioneered the adoption of the system in 1990. Thereafter came the experience of Canada, in 1992. In 1992, the Bank of England announced that its monetary policy would thereafter be directed towards attaining a given inflation rate. Brazil introduced the system in 1999, soon after the fixed exchange rate system collapsed. Currently, without denying the differences between specific cases, over twenty countries have adopted an inflation targeting system, i.e., they conduct their monetary policy with the

purpose of attaining a specific previously announced target for the rate of inflation over a certain period of time (but, in some cases, more than this).

How can we evaluate the experiences so far? As already stated in the Introduction, based on the available literature it is not feasible to make any conclusive assertion as to the efficiency of the model under discussion. Nevertheless, there are many who believe in the superiority of the inflation targeting system, there are many who propose that other countries should adhere to this form of conducting their monetary policies, and many, even within the Fed, defend that the United States should adopt such a policy.

3) The Conduct of Monetary Policy in the USA: A Historical Perspective

The 1970s and 1980s

In the course of the 1970s and early 1980s, or, to be more precise, between 1972 and 1982, the macroeconomic performance of the United States was rather wobbly. Under this period, the largest economy in the world showed a behaviour difficult to be explained by the mainstream: two inflation peaks (1974-1975 and 1980-1981) together with two peaks in unemployment (1975 and 1982). At the time, a diagnosis offered (and accepted by policymakers) suggested it was a "lax" monetary policy that had led to the inflationary surges of the time.

As from 1970, the FOMC, the body responsible for the monetary policy within the Fed, adopted three different approaches to implement its policy (Moore, 1988). In 1970, it began to define formal targets for the growth rate of selected monetary aggregates. Up to 1979, however, its main focus rested on the short run stability of the interest rates. In fact, the target was that concerning the federal funds rate. But this approach changed in October 1979, when a target for bank reserves became the main issue.

This policy generated a high volatility of the basic rate over the period from 1979 through 1982. On one hand, there was a significant fall in inflation, as compared to that prevailing in the 1970s; on the other hand, a serious recession hit the country in 1981-1982. As a consequence, monetary policy once again underwent a change in the second half of 1982, and became more discretionary. As from 1983, new targets were announced for the growth rate of most monetary aggregates, but the relevance of reaching such targets was minimised (Moore, 1988, p. 116).

Alan Blinder also emphasised this gradual moving away from the monetarist experience (Blinder, 1998, p. 29). According to this author, the Fed initiated a gradual process of retreating from the "M targets" in 1982. The target for the growth rate of M1 was formally abandoned in 1987, but the growth rates for M3 and, specially, for M2, retained a subsidiary role in the formulation of monetary policy until 1992. Later, in February 1993, Alan Greenspan announced, "with magnificent understatement", that the Fed would ascribe

"less weight to monetary aggregates as guides to policy". Less? How about zero? Greenspan's proclamation was greeted with yawns in both academia and the financial markets because it was considered old news (Blinder, 1998, p. 29).

The decision to alter monetary policy in the second half of 1982 came in the wake of the discontent with the gravity of the recession of the early 1980s – the most serious recession since the 1930s! This is what led the Fed to abandon the monetarist approach.[5] In this new context, interest rates plummeted, and the economy recovered.

According to Blinder (1988, p. 27), the traditional monetary policy dichotomy between the choice of instruments – interest rate or monetary supply – widely discussed in the literature of the time, was "settled" by events in the real world, not by theory. "Fierce instabilities" in the LM curves projected for the USA and other countries as from the 1970s led economists and policymakers to conclude that to define monetary supply targets was not a viable option. As a consequence, the strategy of fixing targets for the rate of interests "won" in the USA, as well as in other countries. Blinder quotes Gerry Bouey, a former governor of the Bank of Canada, as saying: "We have not abandoned the monetary aggregates, they have abandoned us" (Blinder, 1988, p. 28).

This same line of reasoning can also be found in Benjamin Friedman (1988):

Economists hoping to say something useful about monetary policy have had a tougher time. The quantitative relationships connecting income and price movements to the growth of familiar monetary aggregates, including specially the M1 measure of the money stock that had been the chief focus of monetary policy during the 1979-82, utterly fell apart during this period. Moreover, the collapse of these long-standing empirical regularities was not merely a matter of larger than usual quarter-to-quarter or year-to-year variances around longer-run benchmarks that otherwise continued to be reliable. Double-digit M1 growth, sustained on average over fully five years, repeatedly led prominent

[5] It is worth mentioning again Alan Blinder (1998, p. 29), according to whom, in the case of the Fed, the brief and turbulent experience with monetarism from 1979 to 1982 was, probably, "a marriage of interest, not passion". Blinder's argument is that the Fed had used a monetarist rhetoric to cover its flanks and then promote major increases in the interest rate.

economists who had relied on these relationships in the past to offer widely publicized warnings of an imminent re-acceleration of prices. Yet the inflation rate fell dramatically, and then remained low. The presumption that 'inflation is always and everywhere a monetary phenomenon' became progressively less compelling as a substantive rather than merely tautological description of the determination of prices (Friedman, 1988, pp. 51-52).

The fact is that since late 1982, the policy of the Fed has been mainly directed to macroeconomic performance in terms of inflation *and* growth. Since then, the performance of the economy improved up to the end of the 1980s: unemployment dropped from 10.5% in late 1982 to 5% in early 1989, and the rate of inflation fell from a two digit level to only 3% by the mid-1980s. However, as pointed out by Lima (2003), such successful performance seemed to be a great enigma, in particular for monetarist economists. This is because since then the Fed has focused on the control of the short run interest rate. Since it is practically impossible to identify the theoretical basis on which such monetary policy was and is conducted, one arrives at the conclusion – an unfortunete conclusion for most monetarists – that it has a merely fortuitous nature; in other words, according to the specific circumstances, one would aim at a given target and make a specific decision. In this sense, the monetary policy would seem to be lacking in theoretical support.[6]

As one might have expected, these events occasioned discomfort in certain areas of mainstream economics (see Lima 2003). It was insufficient to claim, after the monetarist failure, that one had returned to the monetary policy of the 1950s. On the other hand, the success of the policy, as put into effect in the major capitalist economies as from the 1980s, made this an almost compulsory subject matter for thinking, and resulted in a relevant literature on the theme. This literature takes as a starting point the fact that the monetary policy practiced by most central banks, including the Fed, as from the 1980s do not set a quantitative target for monetary supply or for reserves. What it aims at is a certain control over inflation rates and/or growth in income and/or in unemployment, using the short run interest rate as an operational target. What central banks are generally seen as doing is "reacting" to changes in inflation, unemployment or output. This "reactive function" might be

[6] "Notwithstanding the Federal Reserve's continuing formulation of money growth targets that it reports to Congress, as current law requires, and even notwithstanding the relatively high success rate in meeting the target for M2, it seems clear enough that the Federal Reserve System since mid-1982 has centered its monetary policy actions primarily around controlling short-term nominal interest rates. … More to the point, they have apparently proceeded in the absence of any well-articulated conceptual framework linking the interest rate as the chief policy instrument to the main macroeconomic policy objectives, or linking the associated large and diverse information base to either the policy instrument or the policy objectives" (Friedman, 1988, p. 70).

described or presented – and, in fact, was so presented – as a rule that defines the interest rate to be pursued by the monetary authority. In the case of the Fed, as we have seen, this could be the rate of the federal funds.

An example of this rule, which also became widely known, is the so-called Taylor Rule. John Taylor, after observing the historical behaviour of the Fed, expressed this behaviour in terms of an explicit rule and, in a paper published in the early 1990s presented a "pattern of behaviour" for the US monetary authorities (see Taylor, 1993). In order to determine the nominal interest rate to be pursued, the Fed (as well as other central banks) would take into account the so-called output gap (i.e., the difference between the effective product in relation its potential value), the deviation of the current rate of inflation as compared to a given target, and a supposed real long run interest rate that would correspond to a equilibrium or "neutral" value. Formally, these relationships can be expressed as follows:

$$i_t = i^* + a\,(\pi_t - \pi^*) - b\,(u_t - u_n)$$

where i^* is the equilibrium interest rate, π_t is the current rate of inflation, π^* is the inflation target, u_t is the current unemployment rate and u_n is the natural unemployment rate.

Thus, the short run interest rate, i_t, should always be adjusted so as to react to the differences between actual and desired performance of price stability and full employment. For instance, supposing an inflation rate equal to the target and an unemployment rate equal to the natural rate, the interest rate should be adjusted to the level of the long run equilibrium rate, i^*. If the observed inflation lies above the inflation target and/or the effective GDP is higher than the potential (or "natural") GDP, it will be necessary to increase i_t. The magnitude of such increase will depend upon the coefficients *a* and *b*, which express the greater or lesser concern of the Central Bank with inflation and with unemployment, respectively.

What a rule of the Taylor type presents is a set of hypotheses concerning the behaviour of an economy and that guide the action of the monetary authority when it defines short term interest rates and the parameters it uses to define such interest rate. It should be stressed that, according to this view, the interest rate which emerges as "adequate" is not so if the intent is to alter real growth in the economy over the long run, since it would not have the power to do so. The specific role of

monetary policy would then be only to pursue low inflation. But this does not imply that it should not – or could not – stabilise output and employment in the short run, or that the effects arising from the search for price stabilisation on the so-called real variables are ignored by the mainstream.

As remarked by Lima (2003), the adoption of a rule like the Taylor rule does not define what would be an adequate rate of inflation in a given context and/or for a given period, much less justify adopting an inflation targeting system. What one can say is that the Fed has so far defined its short term target interest rate based on a "reactive function" of the Taylor type, but which is not committed to fulfilling any nominal target for product or employment growth, or, indeed, for inflation.

But why should it not? Moore (1998) offers a possible answer. The central banks would be reluctant to accept responsibility for results over which they are well aware they have only a very limited influence, even under the best circumstances. In his own words, "The emperor can hardly be expected to announce in public that he has not clothes" (Moore, 1988, p. 137). He also states that central banks would be reluctant to make their decisions and procedures public, basically because of political issues, since the lack of transparency in their procedures and objectives would cloak their responsibility for, say, unpopular decisions. Under circumstances in which their actions and objectives are less transparent, a central bank could not be held accountable for results, whether related to inflation, output or employment.

The 1990s and the First Years of the 21st Century

In the 1990s, an interesting experience in economic policy took place in the USA. The adoption of an adequate mix of fiscal and monetary policies enabled the economy to enter on a path of growth with low inflation and fiscal balance. A fundamental ingredient was the adoption of an accommodating monetary policy, which counterbalanced the conduct of a tight fiscal policy. This episode became known as the Clinton-Greenspan policy mix. This experience confirms the relevance and importance of the discretionary action of central banks.

Towards the end of 1992, the main problem being thrashed out in the US economic debate on the macroeconomic strategies to be adopted was how to reduce the budget deficit without deepening a recession that had already made itself felt in 1990 and which gave no signs of having been overcome.

With Clinton already elected, the Fed gave signs to the effect that if the new administration were to implement a deficit reduction policy, it would be willing to implement an expansionist monetary policy, so as to counterbalance the inevitable adverse consequences of fiscal contraction on economic activity. As from this tacit agreement, in February 1993 the Clinton administration submitted to Congress a plan for a step-by-step reduction in the deficit. At the same time, the Fed initiated the implementation of a more accommodating policy. The interest rate, which in 1991 was set at 7.3% and in 1992 at 5.5%, dropped to 3.7% and 3.3% in 1993 and 1994, respectively. The consequence of this combination of policies (fiscal contraction with monetary expansion) was a continuous growth in product throughout the 1990s, as well as the generation of a fiscal surplus of 0.8% of the GDP in 1998. This policy mix finally became an important benchmark in the history of US economic policy.

The exit from recession and the strong recovery of US economy as from 1992-93 can therefore be ascribed to a compensatory monetary policy. The most evident feature of this policy was (and is) the ability of monetary authorities to take quick and immediate action, so as to respond to adverse economic scenarios. And this can only take place in situations in which an action guided by intelligent and skilled discretion prevails. For this reason, the US experience with monetary policy in the 1990s allows one to assert that this period can be described as an example of a successful discretionary policy.

This greater flexibility in the conduct of economic policy also allowed for a less adverse performance of output in the USA in the beginning of the current decade (Blanchard, 2003, ch. 25; see also Mankiw, 2002). This policy was successful even though the Fed did not adopt an explicit inflation target or an explicit interest rule, such as the Taylor rule (see Greenspan 2004). In practice, the conducti of monetary policy by the Federal Reserve was sufficiently convincing to make the agents operating on the financial markets believe that the monetary authorities had a strong commitment to a low rate of inflation – which, in fact, remained low. In other words, a greater flexibility in the conduct of monetary policy (or the actual exercise of the Federal Reserve's discretionary power) does not necessarily imply a loss of credibility.

In the course of the 1990s, the Fed used the short run interest rate to stabilize the economic activity whenever it saw fit. The major drop in the basic rate in the early 1990s was a fundamental factor to explain why the recession felt at the beginning of the decade was not more persistent and profound. By the same token, the period

extending from 2000 to 2002, marked by the burst of the stock exchange bubble and by the attacks on the Twin Towers in NY, which adversely affected economic activity, retains some similarity with what took place in the early 1990s in terms of the conduct of economic policy. In 2001, a major cut in the basic rate took place, reaching an end-of-the-year figure of 2%. Once again, this policy contributed to mitigate the deflationist pressures on the economy. Once again, this experiment evidences that the Fed, when at this specific point it placed its *priority* on the stabilization of the economic activity (and, to a lesser degree, on the inflation trend), it used its discretionary power to avoid a deeper plunge in economic deceleration.

All this leads us to an essential conclusion. Over the last two decades, monetary policy in the USA has been governed by the use of discretion. And, from the benefit of hindsight, one must acknowledge that, generally speaking, it was successful. Not only has inflation remained low, but monetary policy has been fundamental in stabilizing output and dampening down the economic cycle. It is highly improbable that such results would have been attained if strict monetary rules had governed the action of the country's monetary authorities, or if the degree of discretionary action had been restricted.

In short, the reasons for the remarkable performance of US economy in the 1990s must be sought in many fronts. But, beyond a shadow of a doubt, a relevant factor was the macroeconomic management of the period, which had in its discretionary monetary policy its crucial point of support.[7]

4) Monetary Policy in the USA: The Recent Path (2004-2005)

Traditionally, the Chairman of the Federal Reserve appears in the Congress of the USA twice a year, on which occasions he presents the *Federal Reserve's Monetary Policy Report*. The report submitted to Congress of February 16, 2005 contained a small but perhaps important novelty, under the section dedicated to projections.[8] Differently from what was traditionally presented in the reports for the beginning of the fiscal year, the section *Economic Projections* of the document contained growth

[7] For a discussion of the several short, medium and long-run factors which led to the good performance of US economy during the period, see the Editors' Introduction in Frankel & Orszag (2002).

[8] Available at http://www.federalreserve.gov/boarddocs/hh/2005/february/fullreport.txt

forecasts for output, unemployment and inflation not only for 2005 but also for the subsequent year. A footnote qualifies this change as follows: "As a further step to enhance monetary policy communications, Federal Reserve policymakers will now provide economic projections for two years, rather than one, in the February Monetary Policy Report".

Some analysts have interpreted this change as an additional step towards setting a formal inflation targeting system. In the light of certain interpretations, this change has been taken to represent, in practice, the adoption of an inflation target regime. But do such interpretations really make sense?

There has for long been a major debate in the USA concerning the convenience of the Fed adopting an inflation targeting system.[9] For our purposes herein, mention should be made to the minutes of a meeting held at the FOMC on February 1-2 2005, which indicates the level attained by the debate among the members of the Fed concerning this issue. Among the participants of the FOMC are high-calibre academics – some of them with a long history of defending the "cause" of inflation targeting (e.g. Ben Bernanke, who in October 2005 was officially appointed as successor to Alan Greenspan).

The minutes of the FOMC meeting explicitly shows a division of opinion and, beyond that, the fact that, until then, the majority of the members of the Committee had not been convinced of the necessity for change:

At this meeting the Committee engaged in a broad-ranging discussion of the pros and cons of formulating a numerical definition of the price-stability objective of monetary policy. A staff presentation on the topic included a review of the potential costs and benefits of introducing such a definition as well as of other countries' experiences. In the subsequent discussion, meeting participants uniformly agreed that price stability provided the best environment for maximizing sustainable economic growth in the long run, but expressed a range of views on whether it would be helpful for the Committee to articulate a specific numerical definition for the Federal Reserve's price-stability objective – either a single figure or a range. Those who believed such a move would be on balance beneficial cited, for example, its usefulness as an anchor for long-term inflation expectations, as a vehicle for enhanced clarity of Committee deliberations, and as an additional tool for communications. Several of those who saw greater potential drawbacks were concerned that such a shift might appear to be inconsistent with the Committee's dual mandate of fostering maximum employment as well as price stability or that it might inappropriately bias or constrain policy at times; in any case, with inflation expectations well-contained over recent years, the benefits of announcing a specific inflation

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[9] See, for instance, the papers of the symposium held at the Federal Reserve Bank of Kansas City, in August 2003, under the title *Monetary Policy and Uncertaining: Adapting to a Changing Economy*, available at http://www.kansascityfed.org/PUBLICAT/SYMPOS/2003/sym03prg.htm.

objective were not likely to be large. The Committee decided to defer further discussion (Federal Reserve Board, 2005).

To illustrate this debate, we will present below the viewpoints of the major representatives of the two conflicting tendencies. Specifically, we would like to draw attention to the interventions by Ben Bernanke, a major theorist of the inflation targeting system[10], who, in late January 2006, took over the post of Chairman of the Fed, and by Alan Greenspan, who chaired the Fed for almost 20 years. The latter, despite the criticism on might come up with concerning his role as "The Maestro"[11], made major interventions on the subject (rules vs. discretion, adoption or rejection of the inflation targeting system) based on his vast experience in conducting the monetary policy of the USA. This is one further case in which one must not throw the child out with the tub water.

The following assertion captures the essence of Bernanke's thinking on the subject, in which the focus is on the importance of transparency and of "clear communication" by the Fed with economic agents:

The practice of monetary policy has changed significantly over the past fifteen years or so, both in the United States and abroad. We see today a worldwide trend toward greater clarity, transparency, and specificity in central bank communication with the public. These changes are important for reasons of governance and democratic accountability as well as for promoting the exchange of ideas between those inside and those outside central banks. Significantly, … monetary policy is more effective when the policy committee provides the public guidance on its outlook, objectives, and plans.

Reasonable people differ on how the FOMC statement should evolve from its present form. My own view is that we are approaching the limits of purely qualitative communication and should consider the inclusion of quantitative information presented in a clearly specified framework. … For example, like policymakers at many other central banks, the FOMC could specify its long-term inflation objective and include explicit economic forecasts, conditioned on alternative assumptions, in its statements or in regular reports. …

That being said, the increases in the transparency of the FOMC and the Federal Reserve System during the past decade have really been quite impressive, to the credit of those who have served the institution during that period. Experience has shown that this greater transparency has had many palpable benefits, including more effective monetary policy and better macroeconomic outcomes (Bernanke, 2004, p. 7).

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[10] See, for instance, this author's works published before he became member of the Board of Governors of the Fed: Bernanke et al. (1999) and Bernande (2000).

[11] See, e.g., the critiques as distinct as those of Mankiw (2000), Krugman (2004) e Palley (2005).

It is important to note that this is not an isolated opinion. Recent statements by other members of the FOMC indicate that the Federal Reserve contains other partisans of the inflation targeting system.[12]

Obviously, however, there are those who oppose adopting the targeting system – among them the former Chairman of the Fed, Alan Greenspan.[13] The basic argument is that the relatively low rate of inflation found in countries that have hitherto adopted the inflation targeting regime is not necessarily a consequence of them having adopted such a system. For this reason, they claim there are no significant evidences justifying a change.

In several occasions, Greenspan has made very clear statements on this subject. Besides showing himself as fairly sceptical as to the efficiency of the inflation targeting regime, he also draws attention to another relevant point: according to him, rules are, by nature, very simple. But economic reality is typified by complexity and change. In situations in which the economic environment presents high and non-quantifiable risks ("representing Knightian uncertainty"[14]), rules cannot replace a "risk management approach (or paradigm)" in the conduct of economic policy, which shows itself to be much more appropriate for policymakers in economic environments marked by frequent shocks and by a wide range of complex interactions among the several economic agents (Greenspan, 2003; 2004; 2005b). According to Greenspan:

Some critics have argued that such an approach to policy is too undisciplined – judgmental, discretionary, and difficult to explain. The Federal Reserve should, some conclude, attempt to be more formal in its operations by tying its actions solely to the prescriptions of a formal policy rule. That any approach along these lines would lead to an improvement in economic performance, however, is highly doubtful. Our economic problem is not the complexity of our models but the far greater

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[12] These would include Anthony Santomero, Chairperson of the Fed of Philadelphia, Gary Stern, Chairperson of the Fed of Minneapolis, and Janet Yellen, chairperson of the Fed of San Francisco.

[13] Besides Greenspan, other opponents would include Sandra Pianalto, Chairperson of the Fed of Cleveland, and Donald Kohn, member of the Board of Governors.

[14] Cf. Greenspan (2003, p. 5). On another occasion, Greenspan (2004) contemplated the concept of uncertainty in the following manner: "The Federal Reserve's experiences over the past two decades make it clear that uncertainty is not just a pervasive feature of the monetary policy landscape; it is the defining characteristic of that landscape. The term 'uncertainty' is meant here to encompass both 'Knightian uncertainty', in which the probability distribution of outcomes is unknown, and 'risk', in which uncertainty of outcomes is delimited by a known probability distribution. In practice, one is never quite sure what type of uncertainty one is dealing with in real time, and it may be best to think of a continuum ranging from well-defined risks to the truly unknown" (Greenspan, 2004, pp. 36-37). An interesting and fruitful research agenda would be to investigate these recent "Keynesian incarnations" by Alan Greenspan.

complexity of a world economy whose underlying linkages appear to be in a continual state of flux (Greenspan, 2003, p. 5-6).

In short, a monetary policy based on a risk management approach has shown itself to be the most adequate system for conducting such policies in the contemporary world. An inflation targeting system, as well as rules such as the Taylor rule, present serious limitations when standing face to face with the reality of the environment in which economic policy is formulated. This conclusion derives from the increasingly intricate and complex financial and economic links which characterise the global economy.

5) Concluding Remarks

In view of the preceding, one cannot but assert that those who only too readily have indicated the "additional step to strengthen communication of economic policy" as representing, in practice, the adoption of an inflation targeting system are, in fact, mistaken. There has been no *de facto* adoption of an inflation targeting system because one of its presuppositions, which is a clear and explicit public announcement of a quantitative inflation target to be pursued over a given period, has not been met.

In this respect, it is important to note that Greenspan concluded his testimony to Congress, on February 16 2005, stating that the Federal Reserve will pursue its 2-fold goal of ensuring price stability and maximum sustainable employment, as determined by law (Greenspan, 2005a). And, sharing a position similar to that which Basil Moore understood as being, and perhaps ought to be, that of all central banks, he does not undertake any explicit commitment in attaining any quantitative inflation target. Inasmuch as such a commitment has not been undertaken, nor has any explicit form been stated under which the Fed could be challenged, if it deviates from a given target. As already mentioned, for the defenders of an inflation targeting system, this is the procedure which would give a decisive contribution to the success of the policy.

The adoption of an inflation targeting regime would imply changes in the legal attributions of the Fed, which would have to be submitted to Congress. By law, it is incumbent on the Fed to pursue not only price stability, but also a maximum level of sustainable employment. This is what has been commonly termed the *dual mandate*. What the Fed has made clear in its documents, with the acceptance of

Congress, is that by guaranteeing price stability it is giving its best contribution to attaining the highest possible employment rate over the long run.

How, then, should we interpret the change that has occurred in the official communication of the Fed? We could interpret it as an additional step in the communication between authorities and the market, promoting a greater transparency and improving the signalling of the Fed's intents, so as to influence expectations of the agents concerning future inflation, inducing convergence towards the expectations made explicit by the Fed and minimising the so-called cost of stability.

This is an initiative that is consistent with the spirit of our times, in which price stability is seen as not only a necessary condition but almost as a sufficient conditions to attain sustained long term economic growth. It is also consistent with this same spirit of our times in which a greater availability of information (which could contribute to minimise the inevitable informational asymmetries that are lodged in the markets) and an improved transparency by the central banks are considered to be essential elements to enable economic agents to set up the best possible prospective calculations – and to take "efficient" decisions, thus inducing the economy to converge towards an optimal equilibrium point. This clear and transparent communication policy adopted by monetary authorities in its dealings with the public, providing frequent information on its goals, strategies and evaluations of the state of the economy would lead to an improved efficiency of monetary policy and to a better performance of the economy.

However – and this is an essential point – the US monetary authority remains attentive to the fact that, given the large power it wields, it is ultimately responsible for making crucial decisions in an economy marked by uncertainty and complexity, which no economic model can fully cope with.

Yet, as Keynes put it back in 1937, despite uncertainty, agents must take decisions and act. And action under conditions of "fundamental" or "genuine" uncertainty implies resorting to certain social practices that have been mutually and tacitly agreed upon, such as conventions. The experience in the conduct of monetary policy during the Greenspan era suggests that an important convention in what concerns the process of economic policy is the possibility of prompt action by the monetary authority to quench or minimize crises. This can only be made possible if discretion is an important component of the actions of central bankers.

The Fed has built up an anti-inflationary reputation without having implemented an inflation targeting system. It is precisely this credibility which has ensured a greater flexibility for, at the same time, responding to short-run disturbances in output and employment, without de-stabilizing inflationary expectations. Thus, one might well ask what would be the benefit to derive from a reduction in the flexibility of response by adopting explicit quantitative inflation goals.

As we have seen, the discussion is on the table and remains open. Indeed, with the retirement of Alan Greenspan might gather momentum. But, so far, and in line with what one could term the "Greenspan standard", the Federal Reserve has not tied itself up in a straightjacket.

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