

Inflation targeting and credibility of central banks: what for the bank of Algeria?

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Abstract:

In recent years the monetary strategy of inflation targeting has received a great deal of attention and has been the subject of much debate among experts on monetary policy issues. This article aims mainly, the presentation of this monetary strategy, and above all, highlight the positive economic performances of the central banks having adopted it. In view of these positive results achieved by these central banks, we also wonder about the feasibility of adopting it by the Bank of Algeria.

Keywords: Currency ; inflation ; monetary policy ; central bank ; credibility ; inflation targeting.

JEL Classification: E43 ; E47 ; E52 ; E58

Introduction

Over the past two decades, there has been a resurgence of interest in the conduct of monetary policy, and a lion's share of the inflation-targeting strategy has taken place. These debates have often been influenced by the failure of the monetary targeting strategies pursued by central banks during the 1980s and early 1990s. The fall of nominal and foreign exchange anchorage systems has prompted several central banks to look for other solutions.

Inflation targeting was then imposed as an alternative solution allowing central banks to anchor the inflation expectations of economic agents on the stated objectives, and above all, to retain some necessary flexibility in the short term. Targeting is thus seen as the best compromise between the rigidity of the rule and the flexibility of discretionary policy. Under this arrangement, several countries have endorsed an inflation-targeting policy¹.

This growing enthusiasm for inflation targeting has prompted us in this article to try to provide answers to the following problem:

Has the inflation-targeting policy improved the monetary policy action and thus the efficiency and credibility of the central bank? In other words, following the adoption of inflation targeting; Has the economic performance in terms of the level of inflation and economic growth become better?

A research problem naturally requires one or more hypothesis(s). In this sense, we have made the following assumptions:

- By being independent and responsible, inflation targeting allows the central bank to meet its commitments and gain credibility.
- Through its medium-term time horizon and the transparency of monetary policy, inflation targeting makes it possible to reduce the level of inflation without losing growth and employment.

This article focuses on the economic performance of the central banks that have adopted this monetary strategy. Our goal is to show how inflation targeting facilitates the achievement of central bank objectives at a lower cost.

¹ In 2019, there were 35 countries (17 developed and 18 emerging countries) that adopted such a regime in line with New Zealand, which introduced it in 1989.

1- Definition of inflation targeting

Central bankers have long relied on Keynesian theory to drive their monetary strategies, but the rise in inflation in the 1970s has led them to a strategy of refocusing on the ultimate goal of price stability. The success achieved in the fight against inflation has not lessened their vigilance towards it. Several countries, such as New Zealand, Canada, the United Kingdom and Sweden, have made the fight against inflation the main objective of their monetary policies. The search for price stability in these countries was accompanied in the early 1990s by an announcement of explicit inflation targets or target ranges. Since then, special attention has been paid to this so-called “inflation targeting” monetary strategy. It has been placed at the centre of economic debates on monetary policy renewals. Different definitions of this new monetary framework have been put forward in the literature.

In its broadest sense, inflation targeting covers any monetary policy consisting of setting a quantified inflation target and defining the means and instruments to achieve that objective directly. The central bank analyses the gap between inflation and the inflation target, and its interventions aim to keep inflation close to the target.

Inflation targeting is often defined as a regime focused on pursuing a quantified inflation target, as its name suggests, and setting the framework within which this objective must be achieved. This framework specifies, among other things, the responsibilities of the various actors (central bank, government), the accountability they have to report, and the degree of transparency to be ensured. The central bank retains discretion in the use of instruments to achieve the objectives set.

For the purposes of this article, Bernanke’s definition (Bernanke & Mishkin, 1997) is used as the one that summarizes all the points addressed by the targeting literature. This consensus definition is based on the following four points:

1. The public announcement of an official quantitative inflation target over a specified period of time.
2. The official announcement to the public that the main long-term goal of monetary policy is low and stable inflation.
3. Transparent communication with the public regarding the various objectives and actions undertaken by the monetary authorities.

4. Strengthening the independence and accountability of the central bank in achieving its objectives.

This list of characteristic elements of inflation targeting shows that this monetary regime corresponds to much more than a public announcement of inflation targets over a period of time. Indeed, the government and the central bank cannot just declare their intention to stabilize inflation through the control of their monetary policy. Mishkin (Mishkin, 1999) states that the previous four elements must be brought together in order to speak of an inflation targeting regime.

2- The benefits of inflation targeting

Inflation targeting has emerged over time as a solution to the flexibility-credibility dilemma often raised by economists. It provides a framework for the central bank to clearly demonstrate its intention to achieve an inflation target over the medium term, while ensuring that output does not deviate from its potential level. This type of monetary policy steering has several advantages for the central bank. These include the following:

By its medium-term time horizon, inflation targeting defines a framework for monetary policy that provides both rigidity to avoid problems of temporal inconsistency, and a degree of flexibility, allowing it to respond effectively to large-amplitude shocks.

It therefore meets the growing need for flexibility in the conduct of monetary policy. This flexibility is all the more necessary as the institutional mandates assign to the central bank, in addition to the pursuit of price stability, attention to the development of short-term economic activity. The adoption of a target in the form of a range also allows a certain degree of uncertainty surrounding monetary policy to be taken into account. This uncertainty includes the vulnerability of different economies to shocks, and the relevance of statistical data on inflation.

Targeting also minimizes credibility losses due to transient shocks. The latter deflect inflation from its target only in the short term. Therefore, when monetary policy acts in the medium term, these shocks have no effect on the economy and subsequently do not undermine the credibility and maintenance of the price stability objective.

Another and not least benefit is the degree of credibility and transparency. The inflation-targeting policy is based on the existence of multiple meetings between the monetary authorities of the central bank and those of the

Ministry of Finance. Some meetings are set out in the legislation and others are in response to requests from one of the two parties. As a result, the level of transparency in the actions of policymakers increases and generates more public confidence, all of which leads to a convergence of the expectations of agents with those of the central bank.

By adopting increased communication and transparent monetary policy, proponents of inflation targeting are putting forward, the fact that this monetary strategy makes the central bank more accountable and obliges it to meet the announced target and ultimately increase its credibility and thus permanently fix inflation expectations on the announced target.

This commitment behaviour only strengthens public confidence in the monetary authorities. As a result, their inflation expectations converge and subsequently achieve the objective of price stability.

Through its simplicity and through better targeting of inflation expectations, inflation targeting strengthens the transparency and credibility of the central bank.

An inflation-targeting policy also has the advantage of directing the political debate towards actions that the central bank can take in the long term, rather than actions that it cannot take in the short term, such as accelerating economic growth or reducing unemployment. As a result, this policy reduces the political pressure on the central bank to pursue an inflationary policy. Where monetary authorities have a high degree of credibility, private agents will align their expectations with the direction of the inflation targeting policy.

In total, inflation targeting has a number of advantages that can be summarized in three words: transparency, credibility and flexibility. These advantages may therefore explain the choice of a growing number of countries to join this monetary policy strategy. These advantages may therefore explain the choice of a growing number of countries to join this monetary policy strategy.

3- Prerequisites for adopting inflation targeting

As already pointed out above, the mechanism of inflation targeting is not limited to a mere announcement of a target to be achieved over the medium term. Its application is both long and complex.

According to a number of economists, such as Svensson (Svensson, 1997), successful adoption of inflation targeting requires two paths: institutional reforms (independence, transparency and accountability), and a certain capacity for analysis and forecasting inflation on the part of the central bank. This technical mastery is more than necessary for the central bank to adjust its instruments to a level that will bring inflation close to the announced target. These two conditions are seen as the key to a successful adoption of inflation targeting.

The adoption of such a monetary strategy therefore requires the satisfaction of certain essential conditions and prerequisites. According to Mishkin, Bernanke, and Svensson, there are five prerequisites. They must be satisfied and united so that a central bank can adopt this monetary strategy. These elements are:

- The independence of the central bank.
- Transparency and communication.
- Advanced technical infrastructure (technology enabling the central bank to collect information in a timely manner, and to make reliable forecasts).
- The flexibility of the exchange rate regime.
- A strong financial system.

4- Economic performance of inflation targeting

The question of the effectiveness of inflation targeting in terms of macroeconomic performance is now at the heart of the theoretical and empirical literature. The majority of theoretical studies have shown the benefits of adopting this monetary strategy. Indeed, targeting is often accompanied by a drop in the level of inflation, without society having to pay for it in terms of economic growth. Despite the success of inflation targeting, this strategy continues to be the subject of many economic controversies; However, some economists, such as J. Stiglitz, remain reluctant to do so (Stiglitz , 2007).

This debate on the effect of the adoption of the inflation targeting policy therefore remains open, which pushes us in the framework of this article to try by means of an econometric estimate to provide answers to the following questions: Following the adoption of inflation targeting; Has the economic performance of central banks become better? Has monetary policy become more effective?

5- The impact of inflation targeting on the central bank's credibility (Econometric tests on the effectiveness of inflation targeting)

In order to better assess the impact of inflation targeting on the economic performance of central banks and, in particular, their degree of credibility, we shall proceed in the following section to the study of the slope of the yield curve, which is regarded as a very appreciable measure of the degree of confidence shown by economic operators in the central bank's intention and ability to achieve the stated objectives.

The credibility of the central bank is a vague and intuitive concept. In general, it is equated with the degree of confidence in the central bank in its ability to ensure that the announced decisions are implemented when the time comes. This confidence in the central bank is often reflected in inflation expectations anchored in the stated objectives.

Among the methods used to measure the central bank's credibility, and to determine whether inflation expectations are linked to the announcements made, several authors, such as Goodfriend, used the study of the slope of the yield curve. The latter study is based on the interest rate differential (long-term/ short-term) which can be considered as a measure of inflation expectations.

In theory, when inflationary pressures exist, the central bank raises its short-term interest rate, which will influence the long-term interest rate, which in turn will increase. This positive correlation reflects the expectations made by economic agents; the ability and determination of the central bank to control long-term inflation. The movements observed on long-term rates make it possible, to a certain extent, to assess the scope of a central bank's action and to know whether it is credible in the eyes of economic agents.

In other words, the increase and the proportion by which the long-term interest rate changes in relation to the short-term interest rate, informs us about the expectations of inflation and the degree of credibility of the central bank. This increase and proportion is reflected in the slope of the yield curve. In this case, several scenarios are possible:

- **The slope of the yield curve is 0:**

When the slope of the yield curve is negative, the central bank is considered **highly credible**. Economic agents anticipate that inflation will be contained later. This increase in short-term rates is considered cyclical and transitional. Inflation expectations will remain firmly anchored to the stated objectives and therefore no specific risk premium will be required.

This is due to the confidence that has been built, including the determination and capacity of the central bank to achieve what it had announced. This confidence is mainly related to the results previously achieved by the central bank.

- **The slope of the yield curve is 0 and < 1 :**

The closer the slope is to "0", this means that the increase in the short-term interest rate has been faster and stronger than the change in long-term interest rates. Inflation expectations have changed slightly, meaning that the central bank is considered to be **relatively credible**. The more the slope tends to "1", the more inflation expectations are adjusted and revised upwards. This means a low level of credibility. Economic agents fear that short-term inflationary pressures will not be contained and the rise in short-term interest rates will not be considered cyclical. This uncertainty affects expectations and results in a specific risk premium that increases the long-term interest rate. The central bank is considered to have **little credibility**.

- **The slope of the yield curve is 1**

When the slope of the yield curve is greater than "1", this means that the increase in long-term interest rates has been stronger and more proportional than the increase in short-term interest rates. Economic agents have strong doubts, including the ability of the central bank to lower inflation in the future. In this case, the central bank suffers from **a lack of credibility** which is at the origin of the specific risk premium required by economic agents and which has increased long-term interest rates.

In this article, and in order to assess the impact of the adoption of inflation targeting on the credibility of central banks, we tried to study the yield curve of the 12 target countries in our sample. For reasons primarily related to data availability, our assessment was conducted over the period 1999 to 2019. Our study was conducted in two phases: first, we calculated the rate differentials for each central bank, and second, we attempted to estimate the slope of the rate curve (Table 01). The values of this slope allowed us to classify central banks according to their degree of credibility as explained

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above: highly credible, relatively credible, poorly credible, lack of credibility. The values for this slope are shown in Table 04. They are between -0.0443 and 0.0662.

Table number (01): Classification of central banks according to the slope criterion of the yield curve.

Central Bank	The slope of the yield curve	Classification
Australia	0,009	Relatively credible
Canada	-0,0125	Highly credible
Chile	0,0443	Relatively credible
Czech Republic	0,0036	Relatively credible
Denmark	0,0318	Relatively credible
Iceland	-0,0025	Highly credible
South Korea	-0,0041	Highly credible
New Zealand	0,013	Relatively credible
Sweden	-0,0314	Highly credible
Switzerland	0,0662	Relatively credible
United Kingdom	0,0143	Relatively credible
Norway	-0,0022	Highly credible

Source: Author's calculations based on OECD data.

The results of our study largely confirm our theoretical expectations, in this case a high degree of credibility, following the results achieved by the central banks. Indeed, they were able to reach 8 times out of 10, their targets announced. Achieving this result has strengthened the effectiveness of the monetary policy pursued by the central banks. This efficiency has resulted in an improvement in credibility, which has been shown by a better anchoring of inflation expectations to the announced targets. This anchoring of expectations was materialised by a slope of interest rates either negative or very relatively positive. This means that changes in short-term interest rates have had little or no impact on long-term interest rates, as markets consider them to be cyclical and transitory, and are confident in the intention and ability of central banks to cope with inflationary pressures and contain long-term inflation.

The reading of these results suggests that the adoption of targeting has had an impact on inflation expectations, which are measured by the interest rate

differential. This impact is very significant for some countries, such as Canada, Sweden and South Korea, while it is somewhat less significant for other countries, such as Australia, Switzerland and the United Kingdom.

In addition to our study, and to really test whether the expectations were anchored to the objectives announced by the central banks, we focused on the results achieved during 2007-2008. These two years were marked by a dramatic increase in the level of inflation, which led several central banks to increase their short-term interest rates, like Chile (from 5.18 to 7.24) and Norway (from 4.96 to 6.22).

In theory, this increase should be followed by a proportional increase in long-term interest rates. Instead, our results show some stability in long-term interest rates for most countries, or even a decline for some, such as Norway, where the rate fell by 0.07 percentage point, while the short-term rate increased by 0.25 percentage point. For Chile, the long-term rate increased by 0.15 percentage points, but this increase remains much lower than that recorded for short-term rates by 0.4 percentage points.

At the end of the day, our results show an increase in the credibility of the central banks of countries targeting inflation. When we calculated the slope of the yield curve, we concluded that the financial markets had confidence in the ability of central banks to meet their targets. This confidence was manifested by a very weakly positive or even negative slope. This was also true even during periods when inflation rates rose, such as 2007 and 2008.

6- Monetary policy in Algeria: What about inflation targeting?

Since 2003, the Bank of Algeria has focused on a rules-based approach to the conduct of monetary policy, by targeting an inflation rate level that does not exceed the 3% ceiling. The Bank of Algeria clearly announces that its ultimate objective in the medium and long term is to control inflation at a level below 3%.

But beyond saying, that the Bank of Algeria adopts a policy of targeting inflation is quite misleading. For such a monetary strategy to be put in place, and as we pointed out above in this article, there are several prerequisites for its adoption. Prerequisites, technical but also institutional.

6-1 The institutional prerequisites

Any central bank wishing to pursue an inflation targeting strategy must meet the conditions for the independence, accountability and transparency of monetary policy. So what about the case of the Bank of Algeria?

The Currency and Credit Act (LMC) of April 1990 profoundly changed the relationship between the political authority and the monetary authority. It was based on the statutes of the central banks of advanced market economies. This has led to an early appearance in Algeria's economic and institutional landscape as part of its transition to a market economy.

This law gave the monetary authority considerable autonomy. It was seen as the pivot around which the other economic reforms would be based. It enabled the Bank of Algeria to play a central role in the 1994-1998 adjustment programme with the IMF, which enabled macroeconomic stabilization, the return to financial equilibrium and the medium-term sustainability of the balance of payments.

However, this strong independence granted to the Bank of Algeria will not last long, since in 2001, adjustments were made to the law on currency and credit, by order 240 no. 01-01. The main objective of the order was to reduce the imbalance in decision-making against the executive and thereby reduce the independence of the Bank of Algeria. In addition to this, on August 26, 2003, the government issued another ordinance No. 03-11, which repealed the one issued in 2001, and which further reduced the autonomy of the Bank of Algeria. Following these two orders, the Bank of Algeria recorded a serious decline in terms of independence and autonomy.

As for the transparency and accountability of the central bank, the Bank of Algeria clearly announces a quantified target to be achieved «the ultimate objective of monetary policy expressed in terms of medium-term price stability, namely inflation below 3%», but this remains insufficient. Indeed, inflation targeting is a monetary strategy that is described by Mishkin and Benbernanke as “constrained discretion”, where the central bank must not be content with merely announcing a target, but must also and above all, clearly explain how it intends to achieve its objectives and the instruments it intends to use. As of today, the Bank of Algeria does not provide any information on the instruments² it intends to use, nor on the strategy it intends to adopt.

² For example, the key interest rate, which is considered a major instrument of monetary policy, has remained static at 04% since 2004.

In addition to its very low degree of autonomy, the Bank of Algeria still has to make efforts in terms of transparency and communication to meet the international standards required for the adoption of inflation targeting.

6-2 The technical prerequisites

The adoption of inflation targeting implies a certain capacity for analysis and forecasting of inflation on the part of the central bank. This technical mastery is more than necessary for the central bank to adjust its instruments to a level that will bring inflation close to the announced target. In Algeria, the effectiveness of monetary policy is largely linked to the central bank's ability to control inflation at a low level. The question of the determinants of the latter (inflation) is then imposed as a major condition for the success of monetary policy. However, in Algeria, inflation has several origins, and for the most part, it is imported and outside the control of the central bank, hence the difficulty of adopting an inflation targeting strategy. The risk of failure is very high (the achievement of the stated objectives), and the credibility of the central bank can only be tarnished. Add to this the difficulty of proposing a reliable indicator for measuring inflation, since the CPI used by the ONS is more than biased, and does not take real prices into account. The calculation is based on several subsidised prices.

The adoption of inflation targeting is all the more difficult in Algeria, since it requires the existence of a dynamic financial market, thus facilitating the transmission of monetary policy through anticipations. However, the latter, despite several attempts to revitalize, has experienced no growth, market capitalisation has remained almost the same, and transactions remain almost constant.

Conclusion

Within the framework of this article, particular attention has been given to the evaluation of the effectiveness of the inflation targeting strategy. The main objective of this evaluation was to determine whether the adoption of inflation targeting has improved the efficiency of monetary policy and ultimately enhanced the credibility of central banks, and to consider whether it could be adopted by the Bank of Algeria.

The results we have obtained from the econometric estimate on panel data are consistent with the general trend that emerges from this literature: a strengthening of the credibility of central banks, which is reflected in a

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decrease in inflation, and improved economic growth. The adoption and success of this monetary strategy is conditioned by a certain number of prerequisites which are not yet fulfilled by the Bank of Algeria.

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