

## **Inflation targeting**

**Keynote address by Athanasios Orphanides, Governor of the Central Bank of Cyprus**, at the conference to mark the 15<sup>th</sup> anniversary of the Czech National Bank and the 10<sup>th</sup> anniversary of inflation targeting

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I would like to thank Governor Tuma for his invitation to address this conference. It is indeed a great honour to open this event, all the more so because it celebrates two anniversaries. The first is the 15<sup>th</sup> anniversary of the establishment of the Czech National Bank, which, following its founding in 1993, has been an important institution for guiding monetary and financial affairs in the Czech economy with considerable success. I would therefore like to congratulate Governor Tuma and the staff of the Czech National Bank for this anniversary and wish them continuing success in the future.

The second anniversary is the 10<sup>th</sup> anniversary of the introduction of inflation targeting (IT) as the monetary policy framework of the Czech National Bank. In December 1997, the Board of the Czech National Bank decided to change the Bank's policy strategy and, starting with 1998, implement inflation targeting. At the time, inflation targeting was still a rather new framework, one that had been adopted by only a small but increasing number of central banks. This anniversary offers an excellent opportunity to pause and reflect on the experience with the introduction and practice of inflation targeting - the topic of the conference.

But before I proceed, I should note that the views I express are my own and do not necessarily reflect those of the Governing Council of the European Central Bank.

In the history of monetary policy practice with a fiat currency, numerous frameworks for monetary policy have been suggested but arguably few have generated the excitement and interest experienced with the introduction of inflation targeting. The framework, first introduced down-under by the Reserve Bank of New Zealand in 1989, is still in its teenage years - quite young by historical standards.

Judging by the popularity of inflation targeting in policy fora and academic research, if it were a person, inflation targeting would probably have won the teenage popularity contest in the new millennium. Unlike some other ideas in the realm of monetary economics that after a brief brush with popularity disappeared, leaving no discernible

positive impact, inflation targeting has already left its mark. It is noteworthy that the economic outcomes associated with central banks that adopted the inflation targeting framework have been generally favourable. Thus, the implementation of the framework by the central banks that have chosen to adopt it has likely fostered good monetary policy practice. And, overall, inflation targeting central banks seem pleased with the decision to adopt the framework and subsequent outcomes. Viewed in this light, inflation targeting appears to have much to recommend it.

Despite all the fanfare about inflation targeting, however, not all central banks in the world have converged towards the inflation targeting framework, and there are numerous examples of central banks - large and small - that have steered the economy towards favourable outcomes over time without having adopted inflation targeting. An example of a small central bank in this category, and one close to my heart, is that of the Central Bank of Cyprus, where for many years and until Cyprus joined the euro area at the beginning of this year, monetary policy followed an eclectic approach with some elements - for instance a close focus on the exchange rate - different from those characterizing inflation targeting. An example of a large central bank in the same category, and one I am certain you are more familiar with, is the ECB, whose 10<sup>th</sup> anniversary is also being celebrated this year.

In addition, despite the popularity of inflation targeting, comparative evaluations of the performance of economies where the central bank has adopted inflation targeting, have not resulted in a clear consensus as to whether inflation targeting is preferable to alternative frameworks. To be sure, when looking at inflation targeting economies alone, it appears to be the case that inflation has been generally lower and more stable under the inflation targeting framework than before its adoption. And a similar improvement may also be observed with regard to economic stability. But such improvements over time also characterize many other economies with central banks that have not switched to inflation targeting during the past two decades. The improvement over time may have been somewhat greater for countries where the central banks adopted inflation targeting, but this may just reflect the fact that more room for improvement may have been available, on average, in these cases. Thus, as Ball and Sheridan (2005) documented, once one accounts for reversion to the mean, it is hard to identify major differences in the economic performance associated with IT and non-IT policy frameworks. Viewed in this light, inflation targeting may have been a particularly useful framework to adopt for central banks facing some difficulties that inflation targeting could help overcome, for instance damaged credibility following an episode of exchange rate instability or the abandonment of a managed exchange rate regime.

This begs the following question regarding the alternative policy frameworks that, according to the historical evidence of the past couple of decades, appear to be conducive to good policy practice. (This set would include inflation targeting but also other frameworks that may have less catchy names or no particular label at all). Can one identify some common elements that might perhaps be at the centre of good policy practice more generally, independently of the labels being applied to the alternatives?

Before attempting to provide an answer, it is important to acknowledge that there is considerable diversity in some details associated with the practical application of inflation targeting among the various central banks that identify their framework with inflation targeting. This complicates both the identification of common features as well as the conduct of any comparisons. With this proviso in mind, in the remainder of my remarks I will review some of the defining characteristics of the inflation targeting framework, on the basis of my understanding of how it is practiced, and argue that the elements that contribute to the good outcomes associated with inflation targeting are not unique to inflation targeting but common to other frameworks, for instance the monetary policy framework of the ECB. I will then comment on other elements that are also sometimes associated with inflation targeting and discuss some practical challenges associated with them.

The most fundamental characteristic of inflation targeting is the announcement of an explicit quantitative definition of price stability - typically defined as a low inflation rate - and the acknowledgment that the achievement of this target over time is the primary objective and responsibility of the central bank. There is some variation in the practical application regarding the exact specification of the numerical price stability objective and time horizon within which it is expected to be attained. Some central banks focus on an exact point target, e.g. 2 percent and, at least early on, some were quite strict on the relevant horizon, e.g. suggesting that policy should be such that inflation could always be expected to return to its target within two years. Other inflation targeting central banks focused on a zone target and a more flexible horizon, e.g. specifying the objective as 2-3 percent inflation over the business cycle (what is sometimes referred to as a "thick" target in the case of the Reserve Bank of Australia).

But a commitment to price stability as the key operational objective of a central bank is by no means unique to inflation targeting. Rather it is a characteristic common to all monetary policy frameworks that could possibly be identified as broadly consistent with good policy practice. This is best understood in the light of the near universal consensus regarding the benefits of price stability among monetary economists that has evolved

during the second half of the 20<sup>th</sup> century. In brief, avoiding both prolonged inflation and deflation, and safeguarding price stability contributes to achieving high levels of economic activity and employment by improving the transparency of the price mechanism, reducing inflation risk premia in interest rates, reducing distortions of inflation or deflation and preventing an arbitrary redistribution of wealth and income as a result of unexpected inflation or deflation.

The importance of price stability as the primary objective of a central bank was reinforced in the aftermath of the 1970s inflationary experience around the world which triggered comparisons of the experience associated with alternative policy strategies followed by various central banks during that period of malaise. Following the collapse of the Bretton Woods fixed exchange rate system, the policy adopted in many countries was a gradualist approach that tended to accommodate inflationary shocks and eventually resulted in unanchoring inflation expectations, and high and volatile inflation. In contrast to these approaches, starting in the 1970s, the Deutsche Bundesbank and the Swiss National Bank pursued a monetary policy strategy focused on price stability through the setting of a target growth rate of their chosen monetary aggregate. Indeed, these strategies can be seen as the predecessors of inflation targeting as these central banks were guided by monetary targets consistent with a low rate of inflation that could be interpreted as an implicit inflation target. For example, the Bundesbank has always set its monetary targets at the end of a calendar year for the following year, deriving these targets from the quantity equation, by estimating the growth of the long-run production potential over the coming year, adding the implicit inflation objective and subtracting the estimated change in trend velocity over the year.

The monetary policy framework of the ECB, which can be viewed as the successor of the Deutsche Bundesbank framework, also identifies price stability as the primary focus of the institution and centres around an explicit numerical definition of price stability. Indeed, the price stability mandate is enshrined in the Treaty establishing the European Community (Article 105(1)). According to the Treaty: "The primary objective of the ESCB shall be to maintain price stability". In implementing this mandate, the ECB has announced an explicit quantitative definition of price stability which since 2003 is stated as corresponding to a rate of increase in consumer prices (as measured by the HICP) of below but close to 2 percent per year. Thus, in this respect, the ECB monetary policy framework cannot be distinguished from inflation targeting.

The second key characteristic of the inflation targeting framework is a forward-looking policy orientation that places particular attention on inflation forecasts and inflation expectations. The need for a forward-looking orientation arises from the fact that

inflation reacts to changes in monetary policy with "long and variable lags". This makes inflation forecasts a necessary component of a policy framework focused on achieving price stability. Similarly, since the public's inflation expectations can provide valuable information about the outlook for inflation, their evolution receives special emphasis in any forward-looking policy approach. Monitoring short-term inflation expectations is valuable because expectations are important determinants of actual price and wage setting behaviour and thus actual inflation over time. Expectations over longer horizons are particularly useful for gauging possible backsliding in the central bank's credibility regarding its commitment to maintain price stability. They are also embedded in asset prices and long-term interest rates and thus importantly influence economic decisions with long effective horizons such as investment in capital, housing and durable goods. Monitoring the stability of inflation expectations is also important to gauge the extent to which a central bank can accommodate real economic disturbances without compromising its price stability mandate. When private inflation expectations become unmoored from the central bank's objectives, macroeconomic stabilization can be considerably harder to achieve. Well-anchored inflation expectations facilitate the monetary policy response to adverse supply shocks, thereby enabling central banks to better stabilize economic fluctuations.

For these reasons, inflation targeting central banks place particular emphasis on inflation forecasts and inflation expectations. But the same applies to *any* policy framework focused on achieving price stability, and indeed the forward-looking policy orientation and close watch of inflation forecasts and monitoring of inflation expectations is also common to other policy frameworks, including that of the ECB.

The third characteristic of inflation targeting is a communication strategy that hinges on transparency, starting with the definition of the policy objective (the price stability target), the clear communication of the central bank's policy strategy and the rationale for its decisions, which enhances the predictability of the central bank's actions and its accountability to the public.

Current practice in communication and transparency is best understood in the broader context of the evolution of understanding good policy practice over time. For most of the 20<sup>th</sup> century it was believed that opacity was advantageous to policy makers in central banking, perhaps because it created more room for discretionary action. But in recent decades an evolution towards greater transparency and improved communication has been observed. Why, one might ask, does communication matter? For price stability oriented policy frameworks, an important reason is that clarity regarding the

central bank's price stability objective and public communication articulating the monetary policy strategy may facilitate efforts to maintain well-behaved inflation expectations, even in the presence of a series of adverse shocks. Announcing a quantitative definition of price stability implies a concrete commitment, provides a definitive benchmark for accountability and facilitates the formation of more accurate and better anchored inflation expectations by the public. This in turn improves the trade-off between inflation variability and economic stability that may be attainable by the central bank. It is no wonder then that the publication of targets, forecasts, and detailed explanations of policy actions in the form of statements, minutes or press conferences, though not universal, are now common place. For inflation targeting central banks the inflation report has come to be considered such an important part of the policy of the communication strategy that there are even studies comparing the information content of the reports of various inflation targeting central banks, sometimes giving the feel of a horseracing contest. But once again, the increase in transparency we see as integral to inflation targeting is not unique to inflation targeting but has also been observed in some alternative policy frameworks as well. The ECB framework, for example, also exhibits considerable transparency, and has some features that might be seen as similar to communication aspects of inflation targeting central banks. Two such features are readily identifiable. The first relates to the communication of the monetary policy objective and strategy which is instrumental in stressing the bank's commitment to conduct its policy. The second relates to the monetary policy stance, which is communicated with the introductory statement of the President of the ECB which follows every regularly scheduled monetary policy meeting of the Governing Council. Other communications channels include the monthly bulletin and publications of macroeconomic projections, which also shares some similarities to elements found in some inflation targeting central banks' inflation reports.

To summarize, regarding the three basic characteristics of the inflation targeting framework that are most likely to directly contribute towards good policy practice, namely the quantification of a price stability objective, the forward-looking policy orientation and associated role of inflation projections and inflation expectations, and a transparency in communications, do not seem to be unique to the inflation targeting framework but are important in other frameworks as well. For instance, all three of these elements are also part of the ECB's monetary policy framework.

What then are the characteristics that may distinguish inflation targeting from alternative frameworks more precisely and are these characteristics also critical for good policy practice? To address this question it is necessary to delve more deeply into some

more specific issues that are not necessarily common across alternative models of inflation targeting central banks. I will discuss two examples of elements that differ substantially from the ECB framework to show that such differences may be important and also to highlight their policy implications.

The first example is the presence of a specific fixed horizon such that policy should aim to always bring inflation to its target. The early practical application of inflation targeting stressed that if inflation deviated from its target, policy should be such that it would ensure (at least in expectation) its return to target by a specific horizon, e.g. two years hence. To be sure, such rigidity can be helpful in establishing the credibility of a central bank, especially when inflation targeting is first introduced by a bank without an established track record, or one that may have been damaged. But it may be too rigid for central banks that do not face a credibility issue and for which greater flexibility may be preferable. In the case of the ECB, for instance, the ECB framework stipulates price stability in the medium term but without specifying some fixed horizon at the end of which the inflation forecast should be equal to the target. In this case, the ECB framework allows for greater flexibility than this particular form of inflation targeting. But inflation targeting practice has evolved over the past several years and most inflation targeting central banks now indicate a similar flexibility in the horizon when inflation is forecast to return to target.

The second example I wish to highlight relates to a variation of inflation targeting as presented in some theoretical formulations of optimal monetary policy. Numerous authors have used the term "flexible inflation targeting" framework to describe central banks that, in addition to price stability targets, rely on real economic targets - for instance the concept of potential output - for guiding policy. The motivation has the same roots as the fine-tuning tradition of the 1960s and 1970s and is similarly based on the belief that policymakers possess sufficient knowledge of the economy to utilize optimal control methods in practical policy settings. At the centre of the analytical apparatus is the notion that policy behaviour may be approximated as the minimization of a quadratic loss function that balances deviations of inflation from its target and deviations of output from potential output (the output gap). In these models, targeting of the output gap acquires an elevated status relative to traditional inflation targeting practice, and potentially becomes as critical as targeting inflation - or more so - depending on the relative weight the policymaker supposedly gives to each of its two targets. In practical terms, "flexible inflation targeting" central banks are urged to publish output gap projections in parallel to inflation projections and decide policy by balancing the two projected gaps.

There are well known tradeoffs associated with this way of reasoning. Optimal control practice lacks robustness. If the degree of knowledge assumed does not match reality, it can lead to significantly inferior outcomes than what is attainable by just focusing on price stability in the long run. Historical experience (for instance the fine-tuning experience of the 1960s and 1970s) usefully highlights the pitfalls of failing to respect the limits of macroeconomic knowledge.

In my own personal view, giving up the quest for perfection under conditions that require much more confidence in our knowledge of the economy than we have in exchange for avoiding major policy mistakes, is a prudent and worthwhile exchange to make. As a result, I do not believe that the optimal control element that is embedded in this formulation of flexible inflation targeting reflects good policy practice.

It is noteworthy that in contrast to this particular formulation of flexible inflation targeting, the monetary policy framework of the ECB places much greater emphasis on policy robustness towards maintaining price stability. Indeed, a preference for robustness is at the heart of the monetary analysis part of the ECB framework, which monitors monetary growth as a means of cross-checking from a medium to a long-term perspective.

I conclude by reiterating that inflation targeting has much to recommend it. The experience with it has been generally positive suggesting that application of the framework by the central banks that chose to adopt it is likely to have fostered good monetary policy practice. But in my view, the three basic characteristics of the inflation targeting framework that are most directly contributing towards good policy practice are not unique to the inflation targeting framework but are important in other frameworks, for example the monetary policy framework of the ECB. This may suggest that, as Otmar Issing (2004) pointed out in the past, there is no single best way to tackle the monetary policy problem and that differences in the practices of price-stability oriented central banks should not be exaggerated. Perhaps it is more important to understand the common elements of what contributes to good policy practice such as (i) the quantitative definition of price stability and its recognition as the primary policy objective, (ii) the forward-looking policy orientation and associated monitoring of inflation expectations, and (iii) transparency in communications.

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