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A Review of the Main Aspects of the Inflation Targeting

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ABSTRACT: This research paper presents a review of inflation targeting structures and the conditions a central bank should consider before adopting the regime. Inflation targeting has been broadly adopted in developed and developing market economies. The frameworks of inflation targeting are, in most cases, very identical across countries and a wide consensus has been promoted which supports flexible inflation targeting.
KEYWORDS: inflation targeting, monetary policy, accountability, credibility, transparency

I. INTRODUCTION

In recent decades, many central banks have adopted the inflation targeting technique to limit the general increase in the price level. Within this framework, the central bank approximates and makes public an estimated or "target" rate of inflation and then tries to steer the actual rate of inflation towards the target, utilizing tools such as interest rate modifications. Since inflation rates and interest rates are likely to move in different directions, the probable actions a monetary authority will take to increase or decrease interest rates become much more transparent under the inflation targeting policy. Proponents of inflation targeting believe this drives to increased economic stability.

Considering the challenges faced by central bankers, they have effectively fulfilled their duties in industrialized economies. The rate of inflation has been consistently low in most economies, reaching levels not seen since the 1960s. Moreover, there has been only one moderate global recession since the 1980s, and overall economic growth has been satisfactory. For example, the United States of America has successfully maintained low rates of unemployment along with low rates of inflation. However, the positive economic performance witnessed today does not guarantee similar success in the foreseeable future, as history has demonstrated on numerous occasions. In response, policymakers are working to develop strategies for managing monetary policy that will 'lock in' the gains of recent years and ensure continued stability in the upcoming periods. One such strategy is represented by inflation targeting.

Among various monetary regimes, the inflation targeting framework has emerged as a complementary approach to regimes with flexible exchange rates. Countries of varying sizes and levels of development have consistently chosen inflation targeting as their preferred framework for implementing effective and independent monetary policies. This strategy is often employed by central banks in open markets that operate independently of specific instruments and have a significant history of inflation. Such central banks seek to establish a credible monetary anchor to promote price stability.

Over three decades ago, New Zealand pioneered a novel approach to monetary policy by introducing a target for inflation. The public commitment to monitoring inflation as the primary policy target, coupled with a strong emphasis on policy transparency, distinguished this approach as innovative. Following New Zealand's lead, an increasing number of both emerging and industrial economies, including Canada, the United Kingdom, Romania, and others, have adopted explicit inflation targets as their nominal anchor.

In an inflation targeting structure, the monetary authority sets numerical targets for inflation, indicating that monitoring inflation represents the long-run objective of monetary policy. It is also common to specify policies for bringing the inflation rate back to the announced target if it has been missed. Therefore, under such a regime, the central bank publicly approximates and projects the inflation rate. However, it faces challenges in aligning actual inflation with the target, employing tools such as changes in the interest rate. As inflation rates and interest rates are negatively correlated, the measures the central bank takes to increase or decrease interest rates become transparent in the context of an inflation targeting regime. Advocates of inflation targeting believe that this transparency contributes to economic stability.

A regime based on inflation targeting incorporates several key characteristics, with the most crucial being a quantitative target, typically

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around two percent each year. In most cases, there is also a tolerance interval for the inflation target, usually ±1 percentage point, as observed in countries such as Poland, Romania, the United Kingdom, etc.

II. LITERATURE REVIEW

Rogers (2010) found that inflation targeting demonstrates resilience during financial crises, while Carvalho-Filho (2010) believes that the monetary regime of inflation targeters appears to be more appropriate for dealing with financial crises.

Batini and Laxton (2006) assessed the outcomes of the inflation targeting approach in emerging-market economies. They conducted a comprehensive survey of monetary authorities, collaborating to demonstrate that inflation targeting in emerging-market economies resulted in significant advantages compared to countries adopting other nominal anchors, such as money growth or targets for the exchange rate. They noted that inflation targeters, in contrast to countries pursuing different monetary policies, achieved substantial improvements in anchoring inflation and inflation expectations without adverse effects on output performance.

There are several studies that compare the performance of inflation-targeting central banks with non-inflation targeting central banks. For example, Ball and Sheridan (2003) examined monetary regime outcomes in the Organization for Economic Co-operation and Development (OECD) countries, finding that those with a high inflation history before the 1990s experienced a more significant degree of disinflation compared to countries with a low inflation history. Hyvonen (2004) expanded on the analysis by Ball and Sheridan (2003) and observed that the adoption of inflation targeting partially contributed to the convergence of inflation in the 1990s. Vega and Winkelried (2005) noted a decrease in both the level and fluctuation of inflation in countries that implemented the inflation targeting strategy.

Through an analysis of the extent to which predicted inflation reacts to economic announcements, Levin et al. (2004) found that countries with inflation-targeting central banks exhibit lower persistence of inflation, and their expectations are better anchored.

Mishkin (2004) argues that disclosing the central bank's objective function could complicate communication and weaken support for the monetary authority's focus on long-term goals. Furthermore, certain forms of increased transparency may not be feasible.

Cukierman (2005) identifies situations in which the optimal level of transparency might be intermediate. For instance, it might not be productive for a monetary authority to announce advance signals regarding potential issues in sections of the financial system.

Given the recent pandemic, it is worth noting how central banks responded to COVID-19 and examining changes in individuals' expectations of inflation rates. Niedzwiedzinska (2021) investigated various aspects of the response to COVID-19 among 28 inflation-targeting countries, with 14 representing advanced economies and the rest representing emerging economies. The study observed the actions taken by the respective central banks, and the main conclusion is that authorities reacted to the shock extremely quickly. On average, advanced countries announced their initial policy measures within a month, while emerging countries were even faster, responding within two weeks.

Colman and Nautz (2023) assess the long-term inflation expectations and credibility of the inflation target in Germany. Their findings suggest a decline in credibility during the observed period, especially amid the significant economic downturn associated with the COVID-19 pandemic. Interestingly, despite Germany’s inflation rates consistently remaining below 2% for several years, credibility has diminished primarily due to a growing perception among Germans that the inflation rate will exceed 2% in the medium term.

III. AN OVERVIEW OF HOW CENTRAL BANKS ADOPT INFLATION TARGETING REGIME

Main principles around the inflation targeting regime (ITR)

A typical Inflation Targeting Regime (ITR) is characterized by three main features. The first involves the public announcement of an inflation target, which can be either symmetric or asymmetric, expressed as single points or within bands, to be achieved within a specified period or maintained indefinitely. The inflation target may, in principle, be set low enough to mitigate the distortions associated with high and volatile inflation—resulting in high variability in relative prices and distortions in investment decisions that

lead to wealth redistributions between borrowers and savers. Simultaneously, a non-negative inflation target also serves to facilitate economic lubrication, making it less likely that there will be constraints on the economy determined by descending nominal wage rigidity. Therefore, the higher the value of the inflation target, the less likely the need for nominal wages to decrease to facilitate adjustments in the labour market.

The second characteristic of an inflation targeting regime is defined by an explicit framework for policy decisions aimed at achieving the stated objectives, while the third feature involves a substantial degree of transparency, coupled with an effective communication strategy outlining the planned actions of the monetary authority. An effective communication strategy can enhance the trade-offs confronted by authorities, ensuring that market participants understand the policy landscape and how forthcoming actions may unfold. This, in turn, will help the monetary authority maintain focused inflation expectations around the target.

Inflation targeting: a framework and NOT a rule

Considering the original concept pioneered by the Chicago School during the 1930s, economists have categorized strategies for conducting monetary policy as either 'rules' or 'discretion.' The former emphasizes monetary policies that are essentially automatic, requiring minimal or no macroeconomic analysis or value judgments by monetary authorities. Illustrative examples of such rules include the gold standard, where controlling monetary policy equated to little more than maintaining the gold price at the authorized parity, and Milton Friedman's proposal of constant money growth. In this case, a specific measure of the money supply is required to grow by a predetermined percentage annually, regardless of financial and economic conditions.

Advocates of rules often emphasize the 'credibility' or 'discipline' they instill. By strictly adhering to a fixed rule, the central bank purportedly assures the public that it will not engage in inflationary policies or, conversely, abuse its powers. However, critics may contend that any discipline imposed by rules comes with a high cost, as strictly following a rule deprives the monetary authority of its ability to address unforeseen or unusual situations, not to mention essential modifications in the economy.

The diametrically opposed approach to a rule-based strategy, as per the conventional classifications of policy regimes, is a perspective based on discretion. In this context, a monetary authority employing an exclusively discretionary approach to policymaking refrains from making public commitments regarding its objectives and future actions, except perhaps in general terms. The central bank retains the right to adjust monetary policy on a monthly or weekly basis based on policymakers' assessments of current conditions. Proponents of this approach argue that discretionary policymaking maintains flexibility, allowing the monetary authority to respond to new information or unforeseen developments. However, as advocates of rule-based policies may contend, pure discretion lacks the inherent discipline found in a rules-based approach. The perceived absence of discipline can breed uncertainty in individuals' minds and increase the economy's susceptibility to inflation.

The distinction between rules and discretion becomes readily apparent when examining the challenges encountered by central banks. Nevertheless, there is no absolute commitment in monetary policy. Even the gold standard, often regarded as a benchmark, allowed for a certain degree of policy discretion in practice, particularly for countries with substantial gold reserves. Hence, a prevailing perspective emphasizes that inflation targeting serves as a framework for a monetary regime rather than a rigid rule.

Pre-conditions for inflation targeting

There are four primary requirements highlighted by early literature for adopting an inflation targeting regime. The first involves a high degree of independence for the monetary authority, the second emphasizes the prevalence of the inflation target. Additionally, the third requirement is characterized by an increase in both transparency and accountability. Last but not least, a sound financial system is the fourth essential element (Agenor and Pereira, 2019).

Inflation targeting presupposes that the monetary authority possesses a precise mandate to pursue its primary objective, namely, price stability, and crucially, maintains a high degree of independence in managing monetary policy. This entails, particularly, the ability to resist political pressures to stimulate the economy in the short run and the absence of fiscal dominance. Fiscal dominance refers to the scenario where fiscal policy considerations significantly influence monetary policy decisions. These prerequisites are

particularly challenging to fulfill in countries where a significant portion of the government's income is derived from the inflation tax.

Enforcing a low and stable rate of inflation as the primary goal of monetary policy generally implies the absence of a commitment to a specific value of the exchange rate, as seen in a freely floating exchange rate regime. However, in practice, many countries with a formally flexible exchange rate have central banks that continue to monitor the value of the national currency—often employing a de facto band or target path. Despite having a significant degree of independence and the ability to commit to achieving price stability, there are several reasons for the monetary authority to be concerned about nominal exchange rate movements. Notably, the exchange rate plays a crucial role in transmitting the effects of monetary policy to prices. However, if the pass-through effect is substantial, the monetary authority may be tempted to intervene in the foreign exchange market to limit currency fluctuations. A high level of nominal exchange rate variability raises concerns for monetary authorities as it translates into significant real exchange rate instability and distorts relative price signals for domestic producers. This, in turn, can lead to an inefficient allocation of resources between tradable and non-tradable sectors.

Additionally, in economies with partial dollarization, significant exchange rate fluctuations can instigate instability in the financial and banking sectors by causing substantial shifts between internal and external currency-denominated assets. Lastly, in economies where the banking and corporate sectors carry substantial foreign currency liabilities, exchange rate depreciations can have severe adverse effects on their balance sheets.

Transparency and accountability are crucial characteristics in the administration of monetary policy to foster credibility in an inflation targeting strategy. Holding the monetary authority accountable to the public for its decisions increases the motivation to achieve the inflation target and, consequently, enhances the public's confidence in the central banks' capability to do so. Moreover, this approach can lead to improved decision-making on the part of the monetary authority by subjecting the process of making decisions about monetary policy to public scrutiny. For instance, the requirement for central banks to report policy changes and elucidate the rationale behind those changes to the public sector can contribute to stabilizing inflation expectations and enhancing the effectiveness of the monetary regime under inflation targeting.

A potential accountability challenge in an inflation targeting strategy is linked to the difficulty of evaluating performance solely based on inflation outcomes. The time lag between policy actions and their impact on the market economy creates the possibility for monetary authorities to attribute unforeseen or entirely uncertain events to inadequate performance, rather than taking responsibility for policy mistakes. To mitigate this risk, the monetary authority in an inflation targeting country is often required to articulate its decisions in terms of policy and publicly justify differences between actual results and inflation targets. Openness and transparency are promoted through the periodic dissemination of an Inflation Report, which presents the monetary authority's assessment of current economic developments and a forecast for inflation in the upcoming period or future periods. Accountability can be enhanced by providing public explanations of why the inflation rate deviates from the target, how long the deviations are expected to persist, and, importantly, the policies the monetary authority plans to implement to bring inflation back to its target.

The ability to conduct an unconstrained monetary policy is limited in countries facing serious weaknesses in the financial system. Such weaknesses may compel the monetary authority to frequently inject significant amounts of liquidity to assist struggling banks. Additionally, these weaknesses can undermine the monetary authority's ability to control interest rates. A rise in interest rates, for instance, can lead to substantial default levels among bank borrowers and exert pressure on their financial positions. Moreover, in countries where the banking and corporate private sectors hold significant external currency liabilities, exchange rate depreciations can have significant adverse effects on their financial positions. This concern may lead the monetary authority to be wary of nominal exchange rate movements and consider an implicit exchange rate target. Therefore, a weak financial system does not necessarily contradict the adoption of an inflation targeting strategy

There is an ongoing debate about whether the conditions mentioned in early literature are absolute prerequisites for implementing an inflation targeting strategy. In many cases, few of the original conditions were not satisfied at the time inflation targeting was applied. This was the case for conditions such as monetary authority independence or the absence of fiscal dominance,

issues faced by Turkey and Brazil in 1999 and 2006. Additionally, one condition later considered a prerequisite is a reasonably low rate of inflation, which was absent in several countries when inflation targeting was adopted.

Strict vs. Flexible Inflation Targeting

Strict inflation targeting entails a "single goal" policy, wherein the central bank's primary focus is maintaining the level of inflation near a specified inflation target, with no consideration for other factors.

Flexible inflation targeting emphasizes a scenario in which the central bank is also attentive to output stability and/or various variables, such as the real exchange rate, employment rate, stable interest rates, etc. When employing flexible inflation targeting, the central bank endeavours to return the rate of inflation to the target, but at a more measured pace.

There are several reasons for opting for flexible inflation targeting rather than strict inflation targeting. Firstly, there is the possibility that an overly activist policy, especially one that involves rapid and unpredictable movements in the exchange rate, may be counterproductive and lead to the problem of instrument instability. Consequently, more significant adjustments in both exchange and interest rates may be required, which in the long term can result in fluctuations in inflation rates and hinder the establishment of a stable trajectory, not to mention the potential repercussions for the entire economy.

Secondly, there is substantial uncertainty regarding how the economy operates, including the transmission mechanism for monetary policy and its parameters. As stated by Brainard (1967), "If the model is determined by parameters which are uncertain, then the policy instrument should be developed with prudence, and in most cases adjusted less than if there were no uncertainty." This suggests the need for a more gradual policy approach.

Thirdly, there is inherent uncertainty about the current state of the economy and the nature of the disturbances affecting it. Consequently, the central bank typically waits to obtain crucial information before fully assessing the situation and determining the appropriate policy response. The result of such an approach would imply a more gradualist policy.

Fourth, if changes in monetary policy are substantial and frequent, there is a possibility that public perception of monetary policy, as well as its levels of credibility and predictability, will suffer. For instance, it might be challenging for the monetary authority to convey to the public that a significant reversal is due to new information rather than a result of past mistakes.

Another crucial aspect to consider regarding inflation targeting is the appropriate level of flexibility. If monetary authorities apply an excessively high level of flexibility, meaning the time period for achieving targets is very long or the rate at which they bring inflation back to its target is very slow, doubts about their commitment to the inflation target may arise. This could lead to a loss of credibility in inflation targeting, and expectations of inflation may fail to converge around the target. Therefore, in the initial stages of adopting inflation targeting, the monetary authority may find it prudent to pursue a more stringent approach to clearly demonstrate commitment to the inflation target and to establish credibility more rapidly. This approach is particularly relevant if the initial phase involves a disinflation program. In a later period, once the central bank has demonstrated commitment and a rational degree of credibility is established, there may be more room for flexibility without undermining credibility.

The strengths and weaknesses of an inflation targeting regime

On the first hand, inflation targeting strategy offers several advantages for medium-term monetary policy. Unlike a fixed exchange rate, inflation targeting allows monetary policy to focus on domestic issues and respond to shocks in the domestic economy. In contrast to monetary targeting, another potential monetary policy strategy is inflation targeting, which has a particular advantage—its success is not contingent on a stable relationship between inflation and money. Instead, this strategy utilizes all available information to identify the best frameworks for monetary policy instruments. Inflation targeting is easily understood by the public sector, contributing to its transparency, which is another potential key advantage of this strategy. (Mishkin, 2001).

On the other hand, critics of inflation targeting have highlighted seven significant disadvantages associated with this type of monetary policy regime: it is very inflexible; it admits a high level of discretion; it has the possibility to rise the instability of the output and hinders the economic growth. The fifth weakness is particularly relevant for emerging-market economies, where the accountability of the

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monetary authority becomes fragile due to the difficulty in controlling inflation and the significant time lags from monetary policy instruments to inflation results. The sixth identified disadvantage is the inability of inflation targeting to prevent fiscal dominance. The seventh disadvantage concerns the flexibility of the exchange rate required by inflation targeting, which may lead to financial instability. In many emerging-market economies, where balance sheets of companies, households, and banks are significantly dollarized, the fluctuation of exchange rates is unavoidable under inflation targeting.

IV. CONCLUSION

In the 1990s, when New Zealand first adopted inflation targeting, both policymakers and economists expressed concerns. On one hand, there was worry that inflation targeting might prove too restrictive, compelling central banks to focus solely on maintaining inflation within a specified range, potentially at the expense of other important objectives. However, over sufficiently long periods, with ample target ranges and suitable transparency, many inflation-targeting monetary authorities have been able to deviate from their targets without a significant deterioration in their credibility. In some instances, they have failed to hit their targets by considerable margins for several months.

Inflation-targeting central banks grapple with an inherent tension between achieving flexibility and maintaining credibility. If the monetary authority is excessively rigid in adhering to the inflation target, even in the face of unexpected shocks, it can lead to undesired economic volatility or unhealthy developments in asset prices. On the other hand, an exceptionally flexible inflation-targeting strategy, where the inflation rate consistently deviates from the target, may result in less accurate predictions and, consequently, diminish the credibility of the monetary authority's commitment. Therefore, assuming that the optimal practice may lie in an intermediate approach, a central bank considering the adoption of an inflation-targeting regime might opt for a larger target range initially. This approach can help mitigate the risk of frequent 'misses'.

Similarly, the majority of central banks have found it advantageous to respond promptly when actual inflation begins to deviate from the midpoint of the target range, rather than waiting for the inflation rate to approach the edges of the range before taking action.

Nevertheless, inflation-targeting monetary authorities can enhance their targeting process by adopting a more specific, systematic, and transparent approach to their operational goals. This involves working with a particular intertemporal loss function, making decisions about desired forecasts for both target elements and the instrument rate, and improving communication through the publication of optimal forecasts for these elements.

Additionally, progress can be achieved by incorporating the judgment of the central bank and addressing model uncertainty in a precise manner during the forecasting and decision-making processes. Specifically, the inclusion of model uncertainty allows the monetary authority to base its targeting on a broader distribution forecast rather than relying on more restrictive average forecasts, assuming approximate certainty equivalence (Svensson, 2010).

This review provides a comprehensive analysis of inflation targeting, emphasizing its widespread adoption and the key considerations central banks face in implementing this monetary policy strategy. The paper highlights the evolution of inflation targeting, its benefits, and the challenges associated with maintaining both flexibility and credibility. The discussion delves into the literature, exploring various studies that assess the performance of inflation-targeting regimes, especially during financial crises.

The review underscores the importance of specific conditions for successful inflation targeting, including central bank independence, transparency, accountability, and a sound financial system. It emphasizes that inflation targeting is more of a framework than a rigid rule, allowing for adjustments based on evolving economic conditions. The distinction between strict and flexible inflation targeting is explored, with a recognition of the potential strengths and weaknesses associated with each approach.

The strengths of an inflation targeting regime, such as its focus on domestic issues, transparency, and adaptability to shocks, are juxtaposed with the identified weaknesses, including potential inflexibility, discretion, and the risk of rising economic instability. The review also touches upon the recent challenges posed by the COVID-19 pandemic and examines how central banks responded to the crisis.

Overall, the review contributes valuable insights into the complex landscape of inflation targeting, offering a nuanced understanding of its principles, implementation challenges, and

potential refinements. The analysis encourages central banks to continuously evaluate and adapt their strategies to achieve the delicate balance between flexibility and credibility in the pursuit of long-term economic stability.

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