Can Inflation Targeting Be a Framework for Monetary Policy in Developing Countries?

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In a number of industrial countries, the adoption of inflation targeting as a monetary policy framework has enhanced transparency and accountability. Can this framework also be applied to developing countries?

EARLIER in the decade, a number of industrial countries adopted a framework for carrying out monetary policy that became known as inflation targeting. They adopted this framework as a response to the difficulties they had encountered in conducting their monetary policy using an exchange rate peg or some monetary aggregate as the main intermediate target. At the same time, they saw the move as a way to improve their record of controlling inflation and to make their monetary policies more transparent and accountable, all measures conducive to improving the credibility of monetary policy. In practice, inflation targeting has also served as a means of explaining to the public the costs of an expansionary monetary policy and the need to preempt any inflationary pressures.

So far only a few industrial countries have practiced inflation targeting—in chronological order, the seven countries are New Zealand, Canada, the United Kingdom, Sweden, Finland, Australia, and Spain. This article examines whether this policy can be applied more widely, particularly in developing countries, which face similar, though often much more difficult problems in designing and conducting monetary policy. Before reaching any conclusions, it is necessary first to consider a conceptual framework in which to understand inflation targeting.

Basic premises

The case for inflation targeting begins with the premise that the main goal of monetary policy in any country must be to attain and preserve a low and stable rate of inflation. Although this premise was the subject of controversy among economists not too long ago, it is widely accepted today because of general agreement on the following four basic propositions:

- An increase in the money supply is neutral in the medium-to-long run. This means that money supply increases have lasting effects only on the price level, not on output or employment.
- High and variable inflation is costly, in terms of either the allocation of resources or long-run growth in output, or both.
- Money is not neutral in the short run. In other words, monetary policy has important transitory effects on a number of real variables, including output and unemployment. There is, however, still an imperfect understanding of the nature and size of these effects, their time frame, and the

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means by which monetary impulses are transmitted to the rest of the economy.

• Monetary policy affects the rate of inflation with lags of uncertain duration and varying strength. These lags make it difficult, if not impossible, for the central bank to control inflation on a *period-by-period* basis.

Building on these generally agreed principles, a number of economists see inflation targeting as a framework that can improve the design, implementation, and performance of monetary policy compared with the central banks' usual procedures, which tend to lack transparency. It does so by providing a vehicle that is consistent both with recent developments in the theory and practice of monetary policy and with the principles listed above.

Prerequisites

The first requirement for any country considering the adoption of inflation targeting is that the *central bank should have a considerable degree of independence*. Even though it is not necessary for the central bank to have full legal independence, the monetary authorities must have the freedom to gear the instruments of monetary policy toward some nominal objective.

To meet this requirement, a country must not show any of the symptoms of "fiscal dominance"—in other words, the conduct of monetary policy should not be dictated or constrained by purely fiscal considerations. This implies that public sector borrowing from the central bank and the banking system should be low or nonexistent; the government should have a broad revenue base and should not rely on the revenues from seigniorage generated by excessive currency issuance; domestic financial markets should have enough depth to absorb the placement of public and private debt instruments; and the accumulation of public debt should be sustainable and not unduly constrain monetary policy.

If these conditions are not met, large or protracted fiscal imbalances will give rise to inflationary pressures that will undermine the effectiveness of monetary policy in achieving any nominal target and force the central bank to follow an accommodative monetary policy at high rates of inflation. In this connection, it is generally agreed that once a country has experienced annual inflation rates of 15–25 percent for a number of years, it will be unable to rely on monetary policy alone to target any lasting reduction in the rate of inflation. At high rates of inflation, fiscal and monetary policy tend to become virtually inseparable.

The second requirement for adopting inflation targeting is that the authorities should *refrain from targeting the level or path of any other nominal variable*, such as wages or the nominal exchange rate. A country that chooses a fixed exchange rate system subordinates its monetary policy to the exchange rate objective and is not effectively able to target directly any other nominal variable, such as the rate of inflation. If these restrictions are relaxed through such variants of a fixed-rate system as crawling pegs or target zones, then in theory an exchange rate target could coexist with an inflation target so long as it is clear, and central bank actions show, that the latter has priority if a conflict arises.

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In practice, though, such coexistence could create problems, since the authorities may not be able to convey these priorities ex ante to the public in a way that would be credible. Rather, the public would have to infer the authorities' priorities from their actual responses whenever the exchange rate came under pressure. There is no assurance, however, that either of the two main courses of action open in these situations—adjusting the instrument settings to preserve the nominal exchange rate target or allowing the exchange rate to move beyond the pre-established range—would convey the appropriate signal to the public or increase the credibility of the authorities. The safest and surest way to avoid these problems would be for the authorities to refrain from making strong commitments about the exchange rate's level or its evolution over time.

A country that satisfies these two basic requirements could, in principle, conduct its monetary policy in a way that is consistent with inflation targeting. To do so, however, the authorities would need to set up a monetary policy framework with the following four essential elements:

• explicit inflation targets for some period or periods ahead;

• clear and unambiguous indications that attaining those inflation targets is the overriding objective of monetary policy;

• a model for forecasting inflation that uses relevant variables and information indicators; and

• a forward-looking operating procedure in which the setting of policy instruments depends on assessing inflationary pressures and where inflation forecasts are used as the main intermediate target of monetary policy.

To set up such a framework, the monetary authorities must have the technical and institutional ability to model and forecast domestic inflation; and to assess the effect of instrument changes on future inflation; they must also have a view on the way in which monetary impulses affect the main macroeconomic variables.

Advanced economies

The seven small-to-medium-sized industrial countries listed earlier that have so far used inflation targeting share a number of features that are also relevant in assessing whether the framework is applicable to developing countries.

• Inflation targeting has always been associated with a high degree of *exchange rate flexibility*.

• All countries that have adopted inflation targeting have a measure of *central bank independence,* with considerable, if not total, freedom in setting monetary policy instruments and a minimal burden of financing government budgets. Also, in practice, they all use short-term interest rates as their main operating instrument and rely on well-developed financial markets to alter longer-term rates and transmit the effects of those changes to aggregate demand and inflation.

• The inflation targets set in these countries are all *forward looking*, in that they represent a promise to offset the foreseeable deviations of future inflation from the prespecified targets over a period of one to two years.

• All the countries use inflation targeting as a tool to *build the credibility of the general framework of macroeconomic policy*. In most cases, this task is easier when there is mutual agreement between monetary and fiscal authorities regarding the inflation targets, which reduces the public's perception that the economic team is pursuing conflicting policy objectives.

• Most important, inflation targeting has been introduced only when the rate of inflation was already low—less than 10 percent. This has contributed to the initial credibility of the framework and reduced the risks of either having to announce a very dramatic reduction in inflation (which might

Seigniorage, inflation, and government balance for selected countries [1]

	Seigniorage [2]			CPI inflation			Government balance [3]		
	1980–91	1992–95	1980–95	1980–91	1992–95	1980–95	1980–91	1992–95	1980–95
Advanced economies (21) [4]	**0.75**	**0.32**	**0.64**	**7.2**	**3.3**	**6.2**	**-3.8**	**-4.7**	**-4.0**
United States	0.35	0.44	0.37	5.4	2.8	4.8	-3.5	-3.3	-3.4
Germany	0.48	0.30	0.44	2.9	3.5	3.1	-2.4	-1.6	-2.2
Japan	0.63	0.32	0.55	2.6	0.9	2.2	-3.1	-3.0	-3.1
Inflation-targeting countries (7)	*0.59*	*0.54*	*0.58*	*8.0*	*2.7*	*6.7*	*-2.4*	*-5.7*	*-3.2*
Developing and transition economies, by region [4]									
Africa (19)	**1.42**	**1.31**	**1.41**	**19.6**	**22.2**	**20.2**	**-5.2**	**-4.7**	**-5.1**
South Africa	0.78	0.37	0.68	14.7	10.3	13.6	-3.9	-6.5	-4.6
Asia (13)	**1.53**	**2.04**	**1.79**	**7.6**	**7.1**	**7.5**	**-3.2**	**-1.3**	**-2.7**
China	3.54	7.75	6.52	6.5	16.1	8.9	-1.8	-1.9	1.8
Asia excluding China (12)	*1.34*	*1.57*	*1.39*	*7.8*	*6.5*	*7.5*	*-3.3*	*-1.2*	*-2.8*
India	2.09	2.23	2.12	9.5	9.6	9.5	-8.1	-6.2	-7.6
Indonesia	0.80	1.00	0.85	9.5	8.8	9.3	-0.7	-0.3	-0.6
Korea	0.79	1.12	0.87	8.5	5.4	7.7	-1.2	0.1	-0.9
Malaysia	1.42	3.63	1.97	3.5	3.9	3.6	-6.3	0.8	-4.5
Philippines	1.40	1.39	1.40	15.0	8.4	13.3	-3.0	-1.5	-2.6
Singapore	1.57	1.22	1.48	2.9	2.3	2.8	5.2	13.1	7.2
Taiwan Province of China	2.80	1.41	2.45	4.5	3.8	4.3	0.0	-1.9	-0.5
Thailand	0.94	1.39	1.05	5.8	4.6	5.5	-1.2	2.3	-0.3
Eastern Europe									
Hungary	0.42	4.12	2.52	12.7	23.1	15.3	-1.3	-6.1	-2.5
Poland	7.01	2.23	5.81	99.5	34.6	83.3	-2.3	-3.9	-2.7
Latin America and Caribbean (15)	**3.22**	**2.37**	**3.00**	**251.4**	**110.1**	**216.1**	**-3.3**	**-0.8**	**-2.6**
Argentina [5]	4.58	0.91	3.66	678.5	10.8	511.6	-5.2	0.1	-3.9
Brazil	4.35	7.46	5.13	535.9	1,319.6	731.8	-0.7	-0.3	-0.6
Chile [5]	1.70	1.53	1.66	21.8	11.9	19.3	0.9	2.8	1.4
Colombia	2.20	1.97	2.15	24.5	23.3	24.2	-2.3	-0.5	-1.9
Mexico	3.72	0.69	2.96	61.7	16.8	50.5	-6.8	0.1	-5.1
Middle East and Europe (9)	**2.37**	**1.60**	**2.18**	**22.9**	**13.8**	**20.6**	**-7.2**	**-4.3**	**-6.4**
Egypt	6.53	3.02	5.66	17.9	12.7	16.6	-16.9	-2.8	-13.4
Israel [5]	1.92	0.53	1.57	111.1	11.3	86.1	-10.8	-3.2	-8.9
Turkey	2.98	3.14	3.02	53.3	84.0	60.9	-3.3	-4.7	-3.6

Source: Authors' calculations based on International Financial Statistics and World Economic Outlook databases.

[1] Period averages, in percent.

[2] Defined as the annual change in the monetary base divided by nominal GDP, except for Argentina, Chile, Israel, and Uruguay (see footnote 5).

[3] Central government balance divided by nominal GDP.

[4] Number of countries in parentheses.

[5] Because of the presence of indexed and/or remunerated deposits in the monetary base, seigniorage was defined for Argentina, Chile, and Uruguay as the annual change in M1 (currency and demand deposits) divided by nominal GDP, and, for Israel, as the change in monetary base excluding foreign currency deposits divided by nominal GDP.

not be achieved for a variety of reasons) or setting targets for inflation that might have been perceived as too (undesirably) high.

Developing countries

Under what conditions might inflation targeting be adopted by developing countries? Also, what aspects of the conduct of monetary policy in developing countries are *least consistent* with inflation targeting? Recall that the two main prerequisites for an effective inflation targeting framework are (1) the central bank's scope for conducting independent monetary policy and (2) the undisputed primacy of the inflation objective.

It must first be recognized that, as a group, developing countries are highly heterogeneous. Even though they may share some trends toward greater reliance on indirect monetary policy instruments, increased access to international capital markets, and financial sector reform, these countries have had diverse monetary experiences and are at different stages of financial development.

In some cases, it is immediately clear that countries do not meet the basic requirements for adopting inflation targeting. For example, in countries where the rate of inflation has been 30–40 percent annually for some years, monetary policy will be largely accommodative and will generally have short-lived and unpredictable effects on the inflation rate. In these instances, only a comprehensive stabilization program comprising fiscal consolidation, a tightening of monetary policy, and possibly some institutional reforms will achieve a lasting reduction of inflation.

For most developing countries, though, it is harder to assess the degree to which the economy may comply with the basic prerequisites of inflation targeting. Fiscal dominance does not always lead to unsustainable inflation rates; the extent to which monetary policy accommodates other nominal variables becomes apparent only at high rates of inflation; and the middle-of-the-road exchange rate arrangements adopted by many countries afford the monetary authorities considerable discretion in setting their policy instruments and nominal objectives (sometimes for relatively long periods).

Studies of central bank independence in developing countries have found that their monetary authorities face environments that differ radically from those faced by central banks in advanced economies. In particular, the scope for central banks in developing countries to conduct an independent monetary policy is hampered by three main factors. These are the heavy reliance on seigniorage; shallow financial markets—which often result from government attempts to extract revenue through such forms of financial repression as interest rate ceilings, high reserve requirements, sectoral credit policies, and compulsory placements of public debt; and fragile banking systems.

A look at the data (see table) on revenues from seigniorage, the inflation rate, and the fiscal deficit for 79 developing countries during 1980–95 reveals four interesting findings.

- As expected, reliance on seigniorage is considerably higher in developing countries than in industrial countries. For the former, the average annual recourse to seigniorage falls between 1.4 and 3 percent of GDP, compared with less than 1 percent of GDP in the industrial countries.
- The relationship between average fiscal deficits, inflation, and seigniorage varies considerably across regions and country groups. For example, while the average fiscal deficits in Asia and Latin America between 1980 and 1995 were quite

similar, the differences in their inflation rates and recourse to seigniorage are staggering. In Africa, the average size of a country's fiscal deficit measured in percent of GDP is twice as large as in Latin America, but African countries' average inflation rates and reliance on seigniorage are much lower.

• On average, the reliance on seigniorage in the seven industrial countries that adopted inflation targeting in the 1990s was similar to that for all advanced economies (though higher than in Germany and the United States). Moreover, the improvement in the inflation performance in those countries after they adopted inflation targeting was commensurate with the recent general trend toward lower inflation in all industrial countries.

• Finally, in recent years, the average reliance on seigniorage and the inflation performance of a number of middle-income developing countries—such as Indonesia, Israel, Korea, Mexico, and South Africa—was not much different from the averages of the seven advanced inflation-targeting countries in the period before they adopted inflation targeting as their monetary policy framework.

It is evident, therefore, that in a large number of developing and transition economies, fiscal dominance and poor financial infrastructure severely constrain the scope for an independent monetary policy. For most of these countries, the effective instrument independence of the central bank would require a comprehensive public sector reform that broadens the tax base and reduces reliance on seigniorage and other revenues from financial repression, and a revamping of the banking and financial systems.

For a small group of high-income developing countries, it appears that the constraints imposed by fiscal dominance, high inflation, and financial repression on monetary policy have been less severe, especially in the 1990s. For these countries, the obstacles to conducting monetary policy in a way that would be consistent with inflation targeting would seem to be less related to the feasibility (or lack thereof) of adopting that framework than to the authorities' willingness to give a clear priority to inflation control over the other objectives of monetary policy.

Even in developing countries with well-functioning financial markets, moderate to low inflation, and no symptoms of fiscal dominance, the scope for an independent monetary policy depends on the exchange rate regime and the extent of capital mobility. In this regard, on the one hand, the more flexible exchange rate arrangements that many developing countries have adopted recently have not led their authorities to attach a much lower weight to exchange rate objectives. On the other hand, the stabilization programs in conjunction with financial reform that several developing countries have adopted in recent years seem to have increased the instability of money demand, thus making traditional money targeting procedures less effective.

These developments and the lack of a generally agreed analytical framework for forecasting inflation and assessing the effects of monetary policy have further complicated the task of conducting monetary policy in developing countries. In addition, implementing an inflation targeting framework would require addressing important questions related to the choice of the level and path of the inflation target, the choice of exemptions or "escape clauses," and the treatment of administered prices.

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• In most developing countries, there is no consensus about the optimum inflation rate, which is one of the bases for setting the medium-term inflation target. Consequently, any choice of such a target for developing countries might be seen as arbitrary. There is, though, a general presumption that it should be in a range that is somewhat higher than would be acceptable in industrial countries.

• There is also no agreement on the speed with which the medium-term inflation target should be attained in these economies. Some observers have argued that once a developing country has brought down inflation to within the low-to-moderate range, it should adopt a cautious approach to further disinflation.

• The choice of a price index on which to base the inflation target is also likely to be more problematic in developing economies than in industrial economies, since the former tend to be subject to more numerous and variable supply shocks that affect the price index and inflation.

• In many developing countries, administered or controlled prices are an important component of aggregate price indices and, thus, of the short-run behavior of inflation. In such cases, a proper inflation forecast would need to take account of the timing and extent of changes in those prices. This would require a higher degree of coordination between monetary and fiscal authorities than in situations like those in industrial countries where most prices are market determined.

Conclusion

Inflation targeting is a framework that could be used to conduct monetary policy in some high-to-middle-income developing countries. However, in most developing countries, the preconditions for adopting such a framework are not yet present. Improving the monetary and inflation performance of these economies should probably continue to rely on simpler and less demanding—but not necessarily less effective—monetary policy frameworks.

Over time, a strengthening of institutions and an increasing market orientation could make inflation targeting an attractive option for a number of countries at a relatively more advanced stage of development, particularly if, as experience accumulates, the approach proves to be effective in industrial countries. F&D

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