



Can Inflation Targets Help Make Monetary Policy Credible?

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HOW can central banks best establish the credibility of monetary policy? Devising a transparent framework for monetary policy, this article suggests, may be an effective way to achieve this.

Credibility is an essential element of monetary policy and can immensely increase its effectiveness. This is particularly true for a central bank that is trying to bring about disinflation—whether from moderate inflation rates or from hyperinflation. If the central bank can

convince the public of its determination to bring about price stability, its task is made much easier, since it does not have to battle against the inflationary expectations, built into wage contracts and interest rates, that can make disinflation socially costly.

Building credibility

Important as it is, credibility is elusive: there is no obvious prescription for convincing financial markets and the public that the central bank is actually pursuing its stated goals. One obvious solution is for the central bank to establish a track record: as the public watches the central bank pursuing consistently tight policies and sees inflation gradually coming down, it comes to believe that low inflation will prevail. This can take many years of hard sloggling, though. Is there any way to accelerate the process—and thereby reduce the years of lost output and employment as the central

bank tries to achieve price stability in the face of skepticism from the public and the markets?

The achievement of central bank independence is generally believed to enhance credibility, but how can the public be sure that a newly independent central bank would pursue disinflationary policies? Perhaps one way a central bank could build credibility is through greater transparency: clarifying its goals to the public and the links between these goals and its day-to-day policy actions—that is, establishing a monetary framework.

Intermediate targets. One kind of framework is based on intermediate targets. For example, if monetary policy is oriented toward keeping the exchange rate within a narrow band, this framework has three desirable properties: (1) it provides a guiding rule for monetary policy actions over the short and medium terms; (2) achievement of the exchange rate target is consistent with

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the longer-term goal of disinflation (provided that inflation abroad is lower); and (3) the target and its link with monetary policy instruments are transparent to the public, enabling the authorities' performance to be assessed continuously. As an alternative, some central banks have pursued money-supply targets, which offer other advantages—notably, under some circumstances, they may offer a better guide to price stability, and they are not as subject to testing by the markets—although they are neither as closely controllable nor as directly observable as the exchange rate.

Many central banks have now lost their intermediate targets. Many of those that had been pursuing money-supply targets in the early 1980s found that their ability to control monetary aggregates and to set appropriate growth targets for them was weakened as econometric estimates of money demand disintegrated—as one central banker said, “We didn't abandon M1—M1 abandoned us!” Market pressures forced some European countries—Italy and the United Kingdom—to abandon their exchange rate bands in September 1992, while some others—Finland and Sweden—were forced to discontinue their policies of shadowing the exchange rate mechanism (ERM) of the European Monetary System. Monetary policy in all these countries lost its anchor, leading to a quest for an alternative monetary policy framework.

Inflation targeting. Several countries—including Canada, Finland, New Zealand, Sweden, and the United Kingdom—have chosen to target inflation itself. This entails, first of all, setting a target—a quantified objective for inflation over the medium term. Setting such a target might, by itself, have little effect on the public's expectations; it might very well be dismissed as a pious wish. The key issues are, therefore, how to pursue this target and how to convince the public that hitting the target is the foremost objective of monetary policy.

Since policy actions taken now do not affect inflation for several quarters, or even years, inflation targeting is necessarily forward-looking; merely reacting to the inflation already experienced would be a recipe for stop-go policy. Therefore, inflation targeting, in practice, uses forecasts of inflation as the central policy variable—tightening policy if inflation is projected to be above target and easing policy if inflation is projected to be below. Inflation targeting enhances transparency, including public monitoring of key information variables, and is designed to build credibility more quickly than an intermediate target. Using such a framework sacrifices some of the observability that can be achieved with an intermediate target but avoids the drawbacks

involved in focusing policy on one variable. Like an intermediate target, inflation targeting may establish a clear standard against which the monetary authorities can be judged and may help them establish credibility more quickly.

Inflation targeting thus involves three steps:

- *setting targets* for inflation (together with conditions under which the authorities should accept deviations from these targets);
- *forecasting* inflation conditional on unchanged policies; and
- *formulating and implementing changes* in policy in response to deviations of forecast inflation from the target—possibly, as a subsidiary element, also taking account of developments in the real economy in the shorter term.

Inflation targeting in practice

In countries that have adopted inflation targets, such targeting did not cause any substantial change in the goals of monetary policy but did entail an increase in the transparency with which policy was presented to the public. For instance, in the United Kingdom, periodic inflation reports were published, providing an inflation forecast based on an array of indicators. For several central banks, inflation targeting has also brought greater accountability; most radically, the tenure in office of the Governor of the Reserve Bank of New Zealand depends explicitly on whether inflation targets are achieved. Some other features are common to most or all of the country cases this article discusses: inflation targets are set for a time horizon of 2–3 years ahead, based on the estimated lags in the effects of monetary policy; and the inflation targets are set as a range 2–3 percentage points wide, which reflects recognition of the imprecision of monetary control of inflation while giving the authorities a relatively well-defined goal. In most cases, the targets were not adopted unilaterally by the central bank, but instead with a joint commitment by the central bank and treasury—although, in most cases, the momentum to establish clear targets came from the central bank.

In some countries (Canada and New Zealand), there is an explicit contingency protecting the central bank from blame for missing the target for reasons truly beyond its control. At the same time, contingencies are limited to avoid excessive accommodation of internal or external shocks—avoiding, for instance, accommodating the inflationary consequences of excessive wage increases or fiscal laxity. In other cases (Finland and the United Kingdom), an inflation measure is used that excludes such influences on the inflation

rate as mortgage interest or indirect tax payments. (See box for further information on inflation targeting in New Zealand, Canada, and the United Kingdom.)

It is still too early to assess how inflation targeting has worked in practice. Up until now, however, it has seemed to be a useful approach that might help build credibility through greater transparency—provided it is combined with a genuine commitment, on the part of the central bank, to price stability that is accepted by the government and by the public. It is a potentially promising approach that should be considered by other countries that have no workable intermediate targets.

Issues in implementation

Applying inflation targeting in other countries would require that several issues be addressed. The solution to these issues depends on considerations that may differ across countries.

Time horizon. The horizon over which the target is pursued affects both the target's attainability and its role in holding the central bank accountable. Here, two elements are key: first, current monetary policy affects inflation with a long lag; and second, monetary policy now affects inflation not just at a particular date in the future, but over a longer period. This implies that inflation targets need to be forward-looking and cover a significant period of time. Pursuing inflation targets for a rolling average of, say, the following two years would leave the authorities some scope for adapting monetary policy to changing economic conditions, as well as finding the appropriate adjustment strategy.

Form of target. Should the target be set as a range, as in most of the countries discussed, or as a single number? A range is more likely to be credible than a given figure, since there is virtual certainty that the central bank will miss any absolute target. It is also desirable for the sake of accountability, since the range states the magnitude of deviation that is considered tolerable. If a range is adopted, there is also the question of its appropriate width, with a trade-off between having too wide a range—which does not provide an anchor for expectations and provides a less clear guide for policy—and too narrow a range—which would make outcomes outside the range more likely, thus making credibility harder to achieve.

In some countries, there may be concern that a target range may not provide an adequate focus for expectations and contracts. In Italy, for instance, the Government already announces official inflation targets, which are used as the basis for norms for government expenditures as well as for wage contracts

Inflation Targets in New Zealand, Canada, and the United Kingdom

Three countries that have adopted inflation targeting are New Zealand, Canada, and the United Kingdom. *New Zealand's* adoption of this approach was the most thoroughgoing. The 1989 Reserve Bank Act defines the primary function of the Bank as formulating and implementing monetary policy with "the economic objective of achieving and maintaining stability in the general level of prices." This objective is made operational through Policy Targets Agreements (PTAs) negotiated periodically between the Governor of the Reserve Bank and the Minister of Finance. Thus, the Government retains power over monetary policy objectives, while the Bank is given the freedom it needs to meet these goals. Failing to meet the target can lead to the Governor's dismissal before the end of a normal five-year term.

The PTAs are explicitly contingent on events beyond central bank control (including major changes in indirect taxes, government-administered prices, the terms of trade, or a natural disaster), as well as the direct effects of mortgage interest rates on consumer prices. In such circumstances, the Reserve Bank is allowed to breach the inflation target, as long as it presents a plan that ensures that any overshooting of the inflation target is temporary. Progress is monitored in the

Reserve Bank's Monetary Policy Statements, which are issued at least every six months and placed on Parliament's agenda.

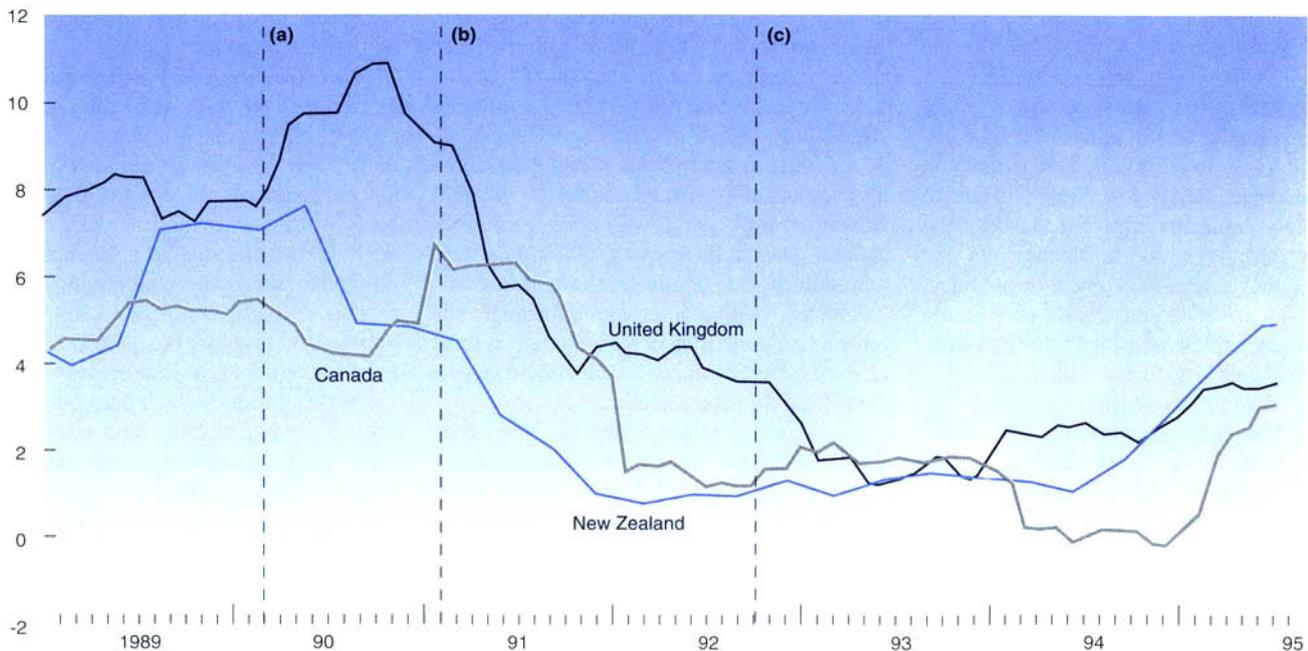
In *Canada*, price stability was made the operational goal of monetary policy in February 1991, when the Minister of Finance and the Governor of the Bank of Canada jointly announced inflation targets. This decision marked the culmination of widespread debate on the merits of price stability. The targets set a gradual downward glide for inflation. The 12-month rate of consumer price index (CPI) inflation was to be kept within a 2–4 percent range by the end of 1992, 1.5–3.5 percent by mid-1994, and 1–3 percent by the end of 1995. The 1–3 percent target has since been extended through the end of 1998. Progress is monitored regularly and, in particular, in the Bank of Canada's Annual Report. As in *New Zealand*, an exception is made for the effects of changes in indirect taxes: the Bank of Canada would adjust the inflation target to accommodate the "first-round" effects, but would counteract any "second-round" effects associated with increases in wages intended to preserve after-tax real wages.

The *United Kingdom's* adoption of inflation targets was prompted by sterling's departure from the exchange rate mechanism of the European

Monetary System. The Chancellor of the Exchequer announced that retail price inflation excluding mortgage payments (RPIX) would be kept within a 1–4 percent range and brought into the bottom half of that range by the end of the current Parliament (April 1997 at the latest). Monetary policy transparency was enhanced: the Bank of England's quarterly *Inflation Report* presents a comprehensive assessment of inflationary pressures, as well as the inflation forecast on which it bases policy advice. Since the Treasury is officially responsible for UK monetary policy, such advice is regularly presented at the monthly meetings of the Chancellor and the Governor of the Bank of England. The UK Treasury publishes a monthly monetary report containing background material for these meetings, and six weeks after each meeting is held, the minutes are made public.

In all three countries, inflation declined after inflation targets were first announced. (See chart.) More recent experience has been mixed: in recent months, inflation has been rising in all three countries, although it has remained well below the levels reached before the inception of inflation targeting.

Selected countries: inflation performance, 1989–95
(percent)



Source: IMF, *International Financial Statistics*.

Note: Vertical lines show the dates of announcement of the first inflation targets in (a) New Zealand, (b) Canada, and (c) the United Kingdom.

nationwide. These targets as yet have no direct bearing on monetary policy. There are concerns that, if Italian monetary policy adopted inflation targeting using a target range around the official inflation objectives, wage settlements would be based on the top of the range, in the belief that this was the most likely outcome within the range. This may be a temporary difficulty, but it should not be an insurmountable obstacle to inflation targeting. The present incomes policy is not a permanent feature of the Italian economy. In the longer term, what will matter is whether the trade unions and general public really believe that the inflation target is likely to be achieved.

Contingencies. Another question is whether the inflation target should be made contingent on shocks affecting the economy, as, for instance, in Canada and New Zealand. There is also a good theoretical case for making a commitment contingent on events that can be readily observed: the central bank can deal with adverse shocks with less loss of credibility if it explicitly adjusts the targets to deal with such shocks, rather than simply allowing slippage without explicit justification. Valid contingencies, subject to which the targets could be revised might, for example, include oil price shocks or other uncontrollable changes in the terms of trade. However, it is important to put some restrictions on the use of contingencies. One would be (as in Canada) to restrict the adjustment of the target to cover only direct effects of the shock and not any secondary pass-through to wages. A second would be to give at most partial accommodation for contingencies, such as adverse fiscal and wage developments, that may be influenced by monetary policy, since full accommodation would introduce a moral-hazard problem which would limit the central bank's ability to brake inflation.

Modeling. Another issue in implementing inflation targeting is the design of the model used to forecast inflation. If monetary policy is to react to deviations of inflation from the target, the direction, extent, and timing of this reaction are key—and these depend critically on the model of the economy used by the central bank. Paradoxically, given most central banks' responsibility for price stability, the econometric models used by many central banks provide little analysis of the monetary transmission mechanism, which would indicate when and how monetary policy affects inflation. For example, the Bank of Italy's mainstream quarterly econometric model allows almost no influence of monetary policy on inflation for a given exchange rate, and the exchange rate is taken as external to the model. These shortcomings should be reme-

died, insofar as is possible, to increase the models' usefulness in guiding monetary policy in pursuit of inflation targets or, indeed, any macroeconomic objectives.

To a certain extent, though, modeling difficulties are inherent: it is difficult, even in principle, to pin down the monetary transmission mechanism within an econometric structure, given the potential multiplicity of channels through which monetary policy may have its effects and the importance of expectations in determining its impact. This consideration suggests a role not only for building bigger and better macroeconomic models but also for consulting a range of different models, especially simpler models such as reduced-form, VAR, or P-star models. Simpler models frequently imply a tighter link between monetary policy and inflation than can be traced in more complex models.

The policy cycle. A clear monetary policy framework should specify the cycle of policy decisions and announcements—what is decided, when, and by whom; and what information is released. A monetary framework could, for instance, specify a timetable as follows: targets would be announced annually. Official inflation forecasts could then be made three or four times a year, as in those countries that have already adopted inflation targeting—a compromise between very frequent, and therefore costly, forecasts and policy re-evaluations, with perpetual shifts in course, and very infrequent forecasts, which would not allow the authorities to revise policy in the light of new information.

Information variables. Combined with the inflation forecasts would be projections of a set of economic variables whose value over the coming months is predicted by the same model used to forecast inflation. These might be divided into three categories: for the first set of variables, the closest thing to intermediate targets in this approach, monitoring ranges could be set at each forecasting round for the four-month horizon until the next round. Money and credit aggregates—for example, M1 (currency plus checking account deposits) and the public sector borrowing requirement—would seem to be good candidates for inclusion in this category. Monitoring ranges for these variables would be set to be consistent with projections derived from the same model generating the inflation forecasts that are the ultimate target of policy. Bands, or ranges, around this target would be set wide enough to be attainable but narrow enough to provide some guidance to policymakers—that is, for the monitoring ranges to be relevant, it should sometimes happen that variables go outside their monitoring ranges, occasioning a policy adjustment. These monitoring ranges

might be announced to the public, in part to give the latter a benchmark against which to evaluate the central bank's performance in pursuit of its stated inflation objective.

A second set of variables would consist of indicators that would be monitored weekly or monthly. For these variables, the central bank would set a reference level associated with the inflation forecast judged to be consistent with the attainment of the inflation target. Deviations of indicators from their reference levels would then be a focal point in the monthly review of policy. Indicators might include money and credit aggregates other than those selected as intermediate targets.

A third set of intermediate variables would consist of indicators that can be monitored on a continuous basis; a short list would include the exchange rate and current (short-term) and forward interest rates. These indicators would be incorporated in day-to-day and minute-to-minute policymaking, and would probably not be announced to the public. One way of incorporating these short-term indicators would be in the form of a monetary conditions index, which would assign weights to key indicators for use in policymaking. Use of this index would imply that a sign of easing in one variable—for example, a depreciation of the currency or a rise in forward interest rates—would signal the need for a rise in short-term interest rates to permit the central bank to maintain the same overall stance vis-à-vis the inflation target. However, this could not be done mechanically, since the appropriate response depends on the nature of the shock affecting the exchange rate for a given interest rate.

Conclusion

Building credibility in the absence of an obvious nominal anchor, such as an exchange rate target, and, often, in the face of uncertainties about fiscal and monetary policies is a key task facing the architects of monetary policy in many countries. If a policy oriented toward price stability can overcome the skepticism of the markets and the public, this will limit the adverse effects on interest rates, output, and employment. A formal monetary framework based on inflation targeting is one approach that may be worth considering. 

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