

# Inflation Targets: The Next Step for Monetary Policy

by Mark S. Sniderman

In September 1995, Senator Connie Mack (R-Fla.) introduced legislation that would require the Federal Reserve to provide a numerical definition of price stability, to set a timetable for achieving it, and to subordinate other monetary policy objectives to it. The merits of these provisions have been debated at length by economists and policymakers alike. Some believe that a monetary policy based on price stability must compromise economic growth, while others note that the differences between a *price-level* objective and an *inflation* target go way beyond semantics. I believe that the nation's economic prosperity will be enhanced by a price-stability approach to monetary policy regardless of how the objective is defined.

I would like to preface my remarks on this subject with a few comments about national economic conditions. The expansion is entering its sixth year, making it one of the longest upturns in the last half of this century. By almost all accounts, this situation will continue for another year or two.

The expansion has been unusual in a few ways that I regard as being positive for the long term. Business investment has been very strong, enhancing the prospect that productivity growth will improve in the years ahead. Inflation has not accelerated over the course of the expansion,

further encouraging productive capital accumulation. Indeed, this impressive inflation performance has been achieved despite an unemployment rate of 5.5 percent—lower than current estimates of the rate considered to be consistent with maintaining stable prices (the non-accelerating inflation rate of unemployment, or NAIRU).<sup>1</sup> Is this expansion an aberration, or evidence of structural economic change? It's too soon to know, of course, but it is promising to see a long expansion without accelerating inflation in a low-unemployment environment.

I believe that the Federal Reserve has materially contributed to the longevity and strength of the expansion by pursuing a monetary policy focused on achieving price stability. If, as a nation, we could find a means for institutionalizing this type of policy, I think we would be pleased with the effects on our living standards over time.

Material increases in a nation's standard of living stem from increases in the quality and supply of labor, the quantity of capital that it works with, and changes in technology. The primary wealth driver in our market economy is the market structure of the economy itself. Poor economic policies (*of all kinds*) lead to resource misallocations and can inhibit economic growth. Poor monetary policy can make resource-allocation decisions

Nations are increasingly turning to specific inflation targets as a way for their monetary authorities to achieve price stability. Although the United States has not yet adopted this approach, such a policy framework would enhance our economic performance.



that appear sensible in the short run very costly to undo when accelerating inflation is eventually stopped and unwound.

Sound monetary policy, by providing a consistent value for dollar-based transactions, encourages long-range planning and leads to what economists call *inter-temporal utility maximization*: the highest sustainable position of economic well-being over time. An environment of low or no inflation can enhance the functioning of our economy just as surely as would a consumption-based tax system with a broad base and low marginal rates.

### ■ Textbook Economics

We do not, however, usually experience the economic policies prescribed by our textbooks. Why don't we have optimal monetary, fiscal, and regulatory policies? One reason, of course, is that many policymakers and the general public do not have a grasp of basic economic principles. But this is probably less important than two other explanations. First, textbook economic assumptions are rarely, if ever, satisfied in the real world. Second, economists disagree about how our economy actually works. What is optimal economic policy to one may be misguided opinion in the eyes of another. Although abstract economic theorizing and professional disagreements are fine in academic debates, policymakers have to make decisions in real time. Despite being relatively insulated from political influence, central bankers still confront a less-than-ideal economy that no one fully understands.

### ■ Central Bank Goals

All of this leads us back to the topic of price-level targeting and the legislation introduced by Senator Mack. A few obvious considerations confront those who must take sides on this sort of issue. Should a central bank be asked to subordinate other objectives to price stability? Should price stability be expressed as a

*price-level* target or as an *inflation-rate* target? What price index should be used, and what should be done about biases in its measurement?

These important questions deserve answers, but I want to approach the subject from a less obvious direction. I think that some historical reflection can provide guidance: How did we get to this legislative juncture, and why should we believe that a legal mandate to achieve price stability will yield desirable outcomes?

It is useful to recall that inflation is a *persistent* increase in the general level of prices, not an occasional rise in the Consumer Price Index (CPI) induced by transitory factors. The average price level could be kept constant by regulating the supply of money to always equal the public's demand for it when the economy is operating at that price level. If we lived in a world where "money" meant only "central bank liabilities" and its demand were perfectly forecastable, price-level stability would be easy to accomplish, because the central bank has nearly perfect control over its own liabilities. In our actual economy, where money includes the liabilities of both the central bank and private financial institutions, we need stability in the money multiplier (the relationship between central bank money and circulating, privately issued liabilities) and in money demand (the amount of money the public wants to hold under current economic conditions). Alas, we have stability in neither.

Over the last several decades, it has become apparent that whatever stability we thought existed in these relationships was the result of the regulations and technology that determined the financial instruments available to the public. Every time innovation and deregulation swept through the financial services industry, new products became available, the relative prices of those products changed, and the public altered its holdings of financial assets. As a result, what came to be regarded as money changed. Using data from the 1950s and 1960s, some

economists (known as "monetarists") established the feasibility of basing monetary policy on the observed movement of certain monetary aggregates, only to see the stability of the underlying relationships collapse repeatedly during the 1980s and 1990s.

It is important to recognize that these relationships have gone awry before. Breakdowns in historical relationships have sometimes led to changes in the definitions of particular monetary aggregates—changes that were specifically designed to restore stability in these relationships! The limitations of this framework became apparent only with the passage of time and poor results.

### ■ Keynesian Economics

Monetarism's failure to provide a reliable policy framework was unfortunate, if only because the reigning Keynesian paradigm was also deficient. In the orthodox Keynesian view, inflation is caused not by "too much money chasing too few goods," but rather by "too many jobs chasing too few people." Inflation control required aggregate-demand management. Vintage Keynesian policy of the 1960s and 1970s hinged on a known potential output path and a stable relationship between unemployment and inflation (known as the Phillips curve).<sup>2</sup> The government decided which unemployment/inflation combination it wanted, and used both fiscal and monetary policies to control the demand for aggregate output. Monetary policy did its part by tightening and easing credit conditions.

We learned two lessons about this framework from the sixties and seventies. First, the Phillips curve is not stable in the normal sense of the term. Output and inflation do tend to move inversely over short periods, but not predictably enough over the course of an entire business cycle, and particularly not from cycle to cycle. This means that the Phillips curve is simply not exploitable by policymakers.



**TABLE 1 INFLATION OBJECTIVES IN SELECTED COUNTRIES**

Country	Price Index	Quantitative Objective <sup>a</sup>	Time-specific?	Exemptions and Caveats
Australia	CPI	2%–3% average	No: medium-term	Mortgage interest payments, government-controlled prices, and energy prices
Canada	CPI	1%–3% between 1995 and 1998	Yes	Indirect taxes, food and energy prices (operational exemption)
Finland	CPI	About 2% from 1995	No	Housing capital costs, indirect taxes, and government subsidies
Israel	CPI	8%–11% for 1995	Yes: updated annually	None
New Zealand	CPI	0%–2%	Yes: updated annually	Commodity prices, government-controlled prices, interest and credit charges
Spain	CPI	Below 3% by 1997	Yes	Mortgage interest payments
Sweden	CPI	2% ± 1% from 1995	No	None
United Kingdom	RPIX <sup>b</sup>	Lower half of 1%–4% range by spring 1997; 2½% or less thereafter	No	Mortgage interest payments

a. For annual inflation.

b. Retail Price Index.

SOURCE: Andrew G. Haldane, ed., *Introduction to Targeting Inflation*, London: Bank of England, 1995, p. 8. Reprinted with permission.

The second lesson is that estimates of potential output, and therefore the “output gap,” are subject to significant errors.<sup>3</sup> Moreover, when the actual rate of unemployment is considered high in absolute terms, the output gap tends to be regarded as large. Judgments of this sort seem especially prevalent during election years.

The Keynesian legacy lives on, but in a more sophisticated form. Expectations now play an important role, as well they should. In the long run, the inflation rate is independent of the unemployment rate, and inflation is, once again, regarded as a monetary phenomenon.<sup>4</sup> Today, policymakers are no longer thought capable of selecting whatever combination of unemployment and inflation they want. Any inflation rate can be sustained indefinitely, as long as an equilibrium condition is met: People must expect that rate to continue. If policymakers want to lower the inflation rate

from wherever it happens to be in equilibrium, the contemporary Keynesian perspective stipulates that they will still need to create a gap between actual and potential output and drive the actual unemployment rate above the NAIRU value for some period.

Conventional estimates suggest that each percentage-point reduction in inflation requires a 2 or 2.5 percentage-point increase in unemployment for a year. For example, when inflation and inflation expectations coincide at 5 percent, the output cost of moving to 3 percent would typically be gauged at 4 to 5 percentage points of extra unemployment annually—enough to question the efficacy of initiating such a policy. The benefits of lower inflation are commonly regarded as trivial. And yet, in the United States we have reduced the equilibrium inflation rate along this path during the last decade without, I believe, incurring exorbitant output costs.

The output-cost argument against attempts to continue on a disinflationary path begs the following question. If the NAIRU model and these cost estimates are correct, why would policymakers not want to raise the equilibrium inflation rate from 5 percent to 7 percent? After all, the neo-Keynesian framework implies that the public would reap the benefits of an output surge and bear only a trivial cost. And why stop at 7 percent? This logic brings us right back to the failure of the original Phillips-curve framework.

The missing link is the failure to stress the important benefits of price stability. The Phillips-curve framework itself offers nothing to tie down the inflation trend or anchor inflation expectations.<sup>5</sup> It brings to mind an old song: “If you can’t be with the one (inflation rate) you love, ... love the one you’re with.” I believe there are significant benefits to be realized from lowering inflation and making it more predictable. Granted,



these benefits have proven difficult to evaluate, because few periods in the post-gold standard era have been marked by inflation sustained in equilibrium and at different rates. However, logic and historical experience convince me that benefits do exist. Between 1953 and 1965, for example, real economic growth averaged slightly more than 3 percent per year, while inflation averaged less than 2 percent. Remember, it took a while for physicists to find those quarks, but they turned out to be there, too.

### ■ Inflation Targets

It's ironic that America's success in reducing inflation from 5 percent to 3 percent may inhibit us from doing better, while the failure of some other nations to produce low inflation has induced them to take stronger steps to tie their monetary authorities to the price stability mast. The countries that have adopted inflation targets—Australia, Canada, Finland, Israel, Mexico, New Zealand, Spain, Sweden, and the United Kingdom—generally did so because they had failed to achieve low or even moderate inflation through business as usual (Australia's target is self-imposed by the central bank, whereas the others stem from legislation).<sup>6</sup>

The basic idea of inflation targeting is that the monetary authority is precommitted to achieve a specified inflation objective. The central bank bases its policy actions on predicted deviations between actual inflation and this pre-specified target. The public, knowing the objective (and in some instances receiving the central bank's inflation forecasts), can anticipate policy actions.

For some of these nations, inflation targeting came as part of a package bestowing greater independence on the central bank from the rest of government. Direct inflation targeting was

regarded as a statement that neither intermediate monetary-aggregate targeting, exchange-rate targeting, nor aggregate-demand management policies provided a sufficient framework for monetary policy. But it meant more than that. It demonstrated that these nations desired a credible nominal anchor for the purchasing power of their currencies and were willing to stake their prestige on explicit public inflation targets to get it. The goals are highly ambitious: With the exception of Israel, the targets center around 2 percent per year (see table 1).

Does inflation targeting represent the grasp of the obvious or the clutch of the desperate? It is far too early to tell. New Zealand has had the most experience, and that amounts to just over five years. I can well imagine that these nations recognize the fragility of their situations. After all, they are aware of the high hopes that previous central bankers had for the various frameworks that preceded this one. Some of these approaches, like the use of intermediate monetary targets, died a quiet death; others, like the European Community's exchange-rate mechanism, died violently.

Anticipating potential problems, policymakers generally build certain flexibilities into inflation-targeting regimes. Many nations adopt a price index that not only excludes such volatile components as energy and food prices, but also eliminates indirect government taxes and mortgage interest payments. In New Zealand, attempts are made to eliminate price-level movements due to supply shocks. The rationale is that supply shocks can shift the price level without altering the underlying inflation rate, and the central bank is not to be held responsible for such supply shocks. One also supposes that supply shocks are expected to be both positive and negative over time, so that the price level itself will not drift away from its intended long-run path as a result of such shocks alone.

It is apparent from examining these various inflation-targeting systems that nations are wrestling with a perceived trade-off between flexibility and credibility. Price-level targets with a narrow tolerance limit and no exceptions for special factors would be the most constraining and arguably would produce the greatest credibility. At the same time, the constraints could lead the central bank to force the real economy to adjust so abruptly to an unanticipated event that the public would disapprove. A very flexible system based on inflation rates and allowing for various disturbances, by contrast, would permit greater output smoothing at the cost of less certainty about the price level itself five to 10 years hence.

It seems that by choosing inflation-rate targets, these nations fear the consequences of returning to a prespecified price level after being forced away by unexpected events. However, their annual inflation-rate targets, generally 2 percent or smaller, are so low that price-level drift should be minimal over time, particularly after taking price-index measurement biases into account.<sup>7</sup> It seems clear, however, that these nations wisely do not regard their inflation-targeting systems as a panacea. They have witnessed other frameworks crack and collapse under stress. What these countries seem to desire above all else is a policy process based on a goal that their monetary authorities can actually deliver over time—price stability—conducted with as much openness as possible regarding how the central bank will respond to evolving economic conditions.



## ■ Conclusion

It may be another 10 years or more before we have enough data to begin scientifically evaluating the performance of these systems. By what standards shall we judge the success of this experiment? Do nations that adopt inflation targets get any interest-rate benefit in the form of a lower inflation or inflation uncertainty premium? Does the greater transparency with which monetary policy is conducted enable the real economy to adjust more efficiently to unexpected macroeconomic events and signals about inflationary pressures? What kinds of shocks will the public allow its central bank to deflect away from the price level, and which others can be absorbed into it? Answers to these questions may differ from country to country.

I don't know whether the United States ever will be included in studies of inflation targeting. Our most recent monetary policy experiences have been sufficiently promising to prompt many observers to say "if it ain't broke, don't fix it."

This prescription has some appeal, but it may be a sign of complacency. As economists, we know that our current policy framework is inadequate because we have no way of anchoring the purchasing power of the dollar. Inflation-targeting systems are worth our time and attention precisely for that reason. Providing an anchor is a more modest policy objective for a central bank than keeping the economy at full employment, but experience reminds us that it is the more realistic goal.

## ■ Footnotes

1. See Douglas Staiger, James Stock, and Mark Watson, "How Precise Are Estimates of the Natural Rate of Unemployment?" National Bureau of Economic Research, Working Paper No. 5477, March 1996. The author estimates NAIRU's current value at 6.1 percent. They also acknowledge that due to the difficulty of obtaining precise measurements, the actual figure may lie anywhere between 4.6 and 6.9 percent. NAIRU is also known as the natural rate of unemployment.
2. The Phillips curve postulates a trade-off between unemployment and inflation: Lower rates of unemployment are possible only with higher rates of inflation.
3. The *output gap* refers to the difference between actual and potential output. The Keynesian approach contends that a negative gap (where actual output exceeds potential output) would have inflationary consequences.
4. In technical language, the long-run Phillips curve is vertical at NAIRU.
5. Remember that under this framework, any inflation rate is sustainable in equilibrium as long as the public expects that rate to continue indefinitely.
6. For a very readable and useful survey of current practices among these countries, see Andrew G. Haldane, ed., *Targeting Inflation*, London: Bank of England, 1995.
7. For a more detailed discussion of the upward biases that may occur in measuring price changes (especially in the CPI), see Michael F. Bryan and Jagadeesh Gokhale, "The Consumer Price Index and National Saving," Federal Reserve Bank of Cleveland, *Economic Commentary*, October 15, 1995.

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