

# A Review of Inflation Targeting in Developed Countries

BY MICHAEL DOTSEY

**I**n the United States, inflation targeting has many advocates, but many others are skeptical about adopting such a policy. Given this debate and inflation targeting's growing adoption around the world, now is a good time to review the economic performance of some inflation-targeting countries. In this article, Mike Dotsey examines five countries that have been targeting inflation for at least 10 years and whose inflation rates, though fairly well contained before inflation targeting, were nonetheless considered too high by policymakers. For purposes of comparison, he also looks at the economic performance of six noninflation-targeting countries.

Many countries have debated the merits of inflation targeting, and some have adopted inflation targeting as a national policy. In an inflation-targeting framework, a central bank announces quantitative targets for inflation and specifies that controlling inflation is a long-run goal of monetary policy. Another common feature is a



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specific policy for bringing inflation back to target in circumstances where the target has been missed. Also, inflation-targeting central banks have often adopted a more transparent policy that entails fairly detailed communications with the public.<sup>1</sup>

New Zealand first instituted this monetary policy framework in early 1990. Since that time, 22 countries have formally adopted inflation targeting, and no country that has adopted it has abandoned it. Although inflation targeting's contribution to overall economic performance is still being debated, the general view is that it has had beneficial effects. Inflation and its

<sup>1</sup> See the book by Bernanke and co-authors for a formal description of inflation targeting.

volatility have generally declined in inflation-targeting countries and output growth has increased. At the same time, it appears that the volatility of output has decreased.

Inflation targeting has many advocates in the United States. Those in favor base their argument on the economic benefits that ensue from low and stable inflation, the possibility that inflation targeting would enhance the FOMC's credibility, and the increased flexibility that could come from increased credibility.<sup>2</sup>

Others, however, are not quite as enthusiastic, and their reservations largely involve concerns over a lack of flexibility that might result from inflation targeting, especially in situations where maintaining a tight rein on inflation could prove damaging to the economy. Critics also point out that U.S. monetary policy has performed quite well over the last 20 years without any formal reliance on an inflation target and that it may be a bit too early to fully evaluate the relative performance of inflation-targeting countries. Inflation targeting's track record is rather short, and we may not yet have seen situations where adhering to an inflation target would be detrimental to economic performance.

Given the status of the debate over inflation targeting, the recent interest in this topic in the United States, and its growing adoption by countries around the world, now seems

<sup>2</sup> For a representative viewpoint, see speeches by Anthony Santomero in *Federal Reserve Bank of Philadelphia Business Review*, Third Quarter 2003 and Fourth Quarter 2004.

an opportune time to review the policies and economic performance of a number of inflation-targeting countries. To carry out this evaluation, I will examine a set of countries — New Zealand, Canada, Australia, the United Kingdom, and Sweden — that have been targeting inflation for at least 10 years and whose inflation rates were fairly well contained before they adopted inflation targeting. This choice helps avoid issues that arise if we choose countries that went from high inflation to low inflation after targeting, and the experience of the countries chosen is more relevant from the standpoint of the United States.

For purposes of comparison, I will examine the economic performance of those five countries along with the performance of six noninflation-targeting countries: the United States, Germany, Japan, France, Italy, and the Netherlands. I will also summarize some recent empirical studies on inflation targeting.

The view taken here is that inflation targeting has been modestly beneficial. Inflation has indeed declined in the five countries examined. Inflation volatility has also declined and, perhaps just as important, so has the inertia in the inflation process itself. Furthermore, expectations of inflation seem to be more stable in the inflation-targeting countries, lending credence to the assertion that inflation targeting enhances a central bank's credibility. Also, there seem to be no negative consequences for economic activity. Output growth has tended to be stronger and less volatile over the time that these countries have targeted inflation. Moreover, central bankers in these five countries have publicly expressed enthusiasm for the framework.

## KEY FEATURES OF INFLATION TARGETING

Inflation targeting establishes a

numerical objective for inflation, and the actual target is stated as either a specific point target or a range. Although the framework explicitly acknowledges that maintaining a low inflation rate is a primary policy objective, inflation need not be the sole objective of monetary policy. When inflation is not the central bank's

## Importantly, in an inflation-targeting framework, monetary policy is delegated to an independent central bank.

only concern, the other concerns are often stated in the central bank's explicit mandate, or the central bank may communicate its concerns more informally to the public. Importantly, in an inflation-targeting framework, monetary policy is delegated to an independent central bank.

By establishing numerical objectives that are to be met over specified periods, an inflation-targeting framework embeds accountability. The issue of accountability has led to very open communication between inflation-targeting central banks and the public. This increased openness is called transparency. The combination of transparency and specific numerical objectives makes monitoring inflation targeting easier for the public. This openness also helps central banks establish credibility because it is easier to judge whether they are meeting their commitments.

Adherence to the general framework of inflation targeting requires the monetary authority to pay attention to a number of particular elements. One key element involves picking a particular measure of inflation. There are numerous measures of inflation, ranging from the headline measure of the consumer price index (CPI) to various less volatile measures of inflation, which typically exclude the food and

energy components of the headline measure. These less volatile measures are typically referred to as the core inflation measure of a price index. Also, should the target be a point or a range, and over what period should inflation be measured? Should monthly inflation be targeted, or should it be some long-run average of inflation? In addi-

tion, if the target is a point target, the central bank must decide how much of a deviation from its target it is willing to tolerate. For example, should the implicit or explicit range be just a few percentage points or wider?

Other equally important considerations involve whether the central bank should have multiple goals, such as a target for output growth or the unemployment rate, and how a central bank can be held accountable for its actions. Communication and transparency become quite important in an inflation-targeting regime. But how transparent should the central bank be?

The various approaches of the five inflation-targeting countries examined in this article are summarized in Table 1. As we can see, approaches to inflation targeting vary.<sup>3</sup> However, although there are a number of differences, there are some key commonalities. Most have a point target but are content to let inflation vary within plus or minus 1 percent of the target. Also, most central banks currently target an annual average of the headline CPI, but they also report the behavior

<sup>3</sup> Excellent summaries of inflation targeting can be found in the book by Edwin Truman and the book by Bernanke and co-authors.

**TABLE 1****Inflation-Targeting Framework of Five Countries**

<b>Country</b>	<b>Date</b>	<b>Type of mandate</b>	<b>Setting</b>	<b>Transition period to reach final target</b>	<b>Time frame to correct deviations</b>	<b>Communication</b>	<b>Independence</b>
New Zealand	Dec. 1989	Price stability	Range of 1-3% CPI over medium term	Yes	Not explicit	Quarterly monetary policy statement	No: Target set by agreement between government and bank
Canada	Feb. 1991	Multiple	2 pctage points of CPI with $\pm 1\%$ tolerance	Yes	6-8 quarters	Quarterly monetary policy report	No: Target set by government and bank
U.K.	Oct. 1992	Hierarchy with price stability first	2 pctage points of CPI with $\pm 1\%$ tolerance	Yes	Not specific, but required to set horizon each instance	Quarterly inflation report	No: Target set by government
Sweden	Jan. 1993	Price stability	2 pctage points of annual CPI with $\pm 1\%$ tolerance 1-2years ahead.	No	Yes 1-2 years	Quarterly inflation report	Yes
Australia	June 1993	Multiple	Range of 2-3% CPI over medium term	No	No time frame	Quarterly statement on monetary policy	Yes

Source: Pooled from various materials (see references).

of core measures. Many, but not all, report a time path for bringing inflation back to target if the target is missed. Finally, all of the inflation-targeting

central banks are quite transparent and issue frequent and detailed communications concerning policy. The only major difference is with respect to

independence. Although all independently set interest rates, only two out of the five have sole responsibility for setting the ultimate goals of policy.

**TABLE 2****Inflation and Output Growth in Inflation-Targeting Countries, Before and After\***

Country	Pre-inflation Targeting (10 years prior to adopting target; for dates see Table 1)				Post-inflation Targeting - 2004 (for dates see Table 1)			
	inflation	growth	s.d. inflation	s.d. growth	inflation	growth	s.d. inflation	s.d. growth
NZ	11.4	1.8	2.9	2.7	2.1	3.0	1.8	2.4
Canada	5.7	2.8	2.9	2.9	2.0	2.7	1.3	2.1
U.K.	5.5	2.5	3.0	1.9	2.5	2.9	0.8	0.7
Australia	6.0	3.2	2.9	2.7	2.6	3.8	1.6	1.1
Sweden	6.7	1.9	2.9	2.3	1.5	2.5	1.1	1.6
Avg. IT	7.1	2.4	2.9	2.5	2.1	3.0	1.3	1.6

**Inflation and Output Growth in Noninflation-Targeting Countries, Comparison**

	1982-1992				1992-2004			
	U.S.	4.0	3.0	1.3	2.6	2.5	3.3	0.6
Japan	1.9	3.7	1.1	1.8	0.1	1.1	1.0	1.6
Germany	2.6	2.7	1.7	5.3	1.8	1.1	1.4	1.4
France	5.1	2.2	3.3	1.1	1.6	1.9	0.6	1.3
Neth.	2.6	2.5	2.3	2.2	2.4	2.4	0.8	1.6
Italy	8.3	2.2	4.6	1.3	3.0	1.5	1.3	1.4
Avg. NIT	4.1	2.7	2.4	2.4	1.9	1.9	1.0	1.4

\* Inflation rates are annualized changes in the headline CPI and growth rates are annualized rates of growth in GDP.

## EXPERIENCE UNDER INFLATION TARGETING

Now let's compare the experience of the five inflation-targeting countries with that of the six noninflation-targeting countries. These six countries serve as a reference, preventing me from attributing various economic outcomes to inflation targeting when, in fact, these outcomes may be a result of global economic conditions. For example, output volatility declined in all 11 of the countries from 1992 to 2004, the years in the latter half of my sample. Attributing the entire decline in the inflation-targeting countries to inflation targeting would be erroneous. Inflation targeting should be viewed as helping to lower output volatility only if inflation-targeting countries experience a greater decline than noninflation-targeting countries.

First, let's look at data on inflation and output growth for both the five inflation-targeting countries and the six noninflation-targeting countries. For the inflation-targeting sample, we'll use data for the 10 years before the adoption of inflation targeting and from adoption to the end of 2004. For the noninflation-targeting countries, the first sample of data covers 1982 to 1992, and the second sample covers 1992 to 2004. This methodology allows a visual comparison of the data before adoption of inflation targeting and after. The data are shown in figures 1 and 2 and summarized in Table 2.

The first thing to notice is that with the exception of Italy, the inflation-targeting countries had higher inflation rates in the first part of the sample, while output growth was fairly comparable across the two groups. Therefore, it is evident that the U.S., Japan, Germany, and the Netherlands had less incentive to adopt inflation targeting, since their inflation rates were already fairly low. In the second half of the sample, both sets of coun-

tries have similarly low rates of inflation, and high inflation is not deemed to be a problem for any of the countries.<sup>4</sup> Thus, it appears that inflation targeting is associated with a lowering of inflation for all five countries that adopted it but that central banks can also achieve low inflation without explicitly targeting inflation.

However, to gauge the effectiveness of inflation targeting, we want to examine the comparative differences in behavior of the two groups of countries over the two samples. Some of the

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noninflation-targeting countries may have specific circumstances that allow them to more easily keep inflation low. For example, the noninflation-targeting countries tend to be larger countries and may be more immune to the effects of changes in international prices. We do not want to conclude that inflation targeting is ineffective when two countries have similarly low inflation, one an inflation-targeting country and the other one not, since that outcome may occur because inflation targeting was helpful in the country that adopted it but was less needed in the country that didn't. To avoid this confusion, I concentrate on differences in inflation and output growth across the two groups of countries and across the two sample periods. Doing so cancels out factors specific to a particular country that may affect

<sup>4</sup> Japan, on the other hand, suffered from deflation and a very sluggish economy in the second half of the sample. It is possible that Japan would have benefited from inflation targeting because it would have forced the country to have a more expansionary monetary policy.

the level of inflation because those country-specific factors are assumed to be the same across the two sample periods. By looking at differences across the two sample periods, we can remove that level effect.

In that regard, the graphs show that both sets of countries saw a reduction in inflation, but, on average, the reduction was greater for inflation-targeting countries. In those countries, average annual inflation rates declined 5 percentage points as opposed to 2.2 percentage points for the noninfla-

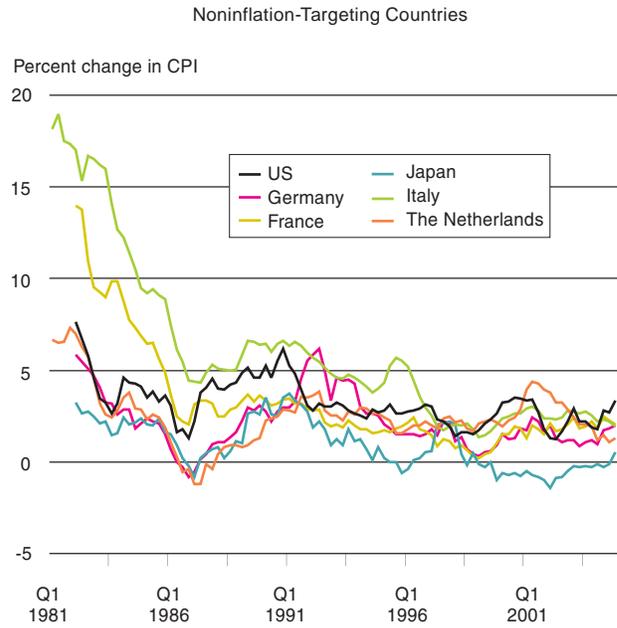
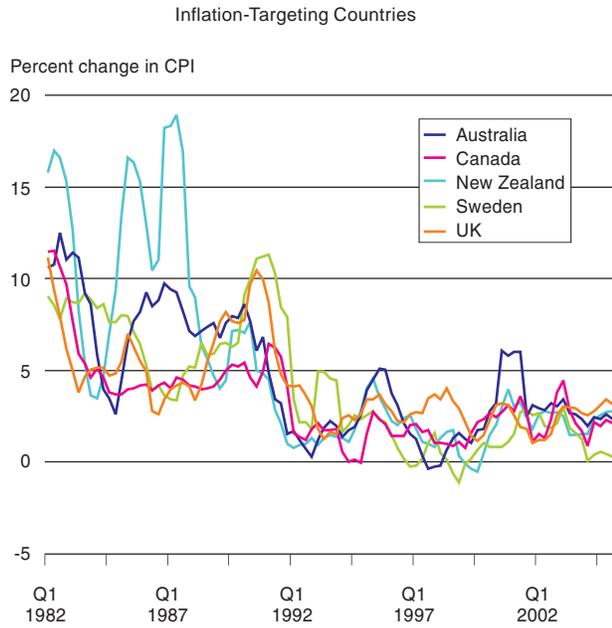
tion-targeting countries. Also, output growth increased by an average annual rate of 0.6 percentage point in the inflation-targeting countries but actually declined 0.6 percentage point in the noninflation-targeting countries.

Next, let's look at the relative variability of inflation and output over the two sample periods (Figure 2). Excluding Italy, the variability of inflation, as measured by the standard deviation of annualized growth rates in the headline CPI, is greater for the inflation-targeting countries before the adoption of inflation targeting. After adoption, the average volatility of inflation fell a dramatic 1.6 percentage points for the inflation-targeting countries, but it also fell 1.4 percentage points for the noninflation-targeting countries. As in the case of the decline in the inflation rate, much of the decline in volatility in the noninflation-targeting countries occurred because France and Italy became part of the European Currency Union and one of the requirements for joining the union was a low and stable inflation rate. Thus, there was institutional pressure for France and Italy

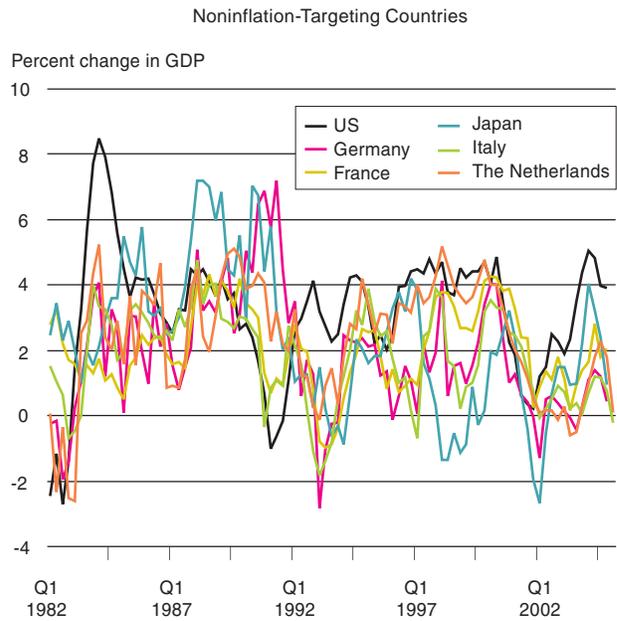
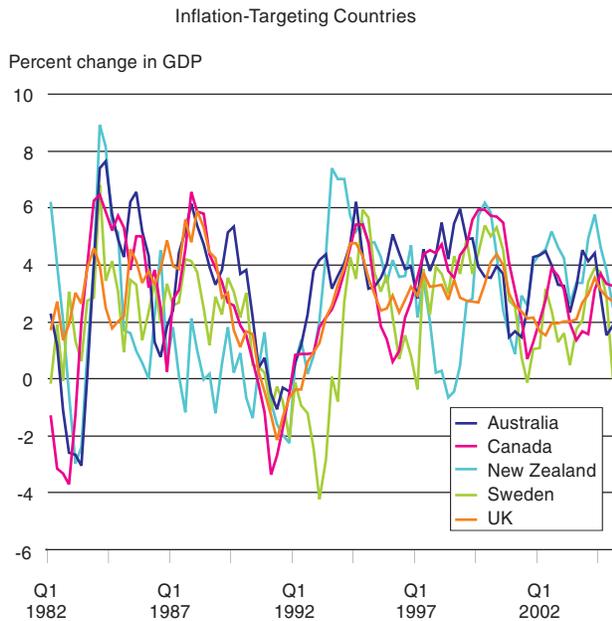
**FIGURE 1**

# Inflation Rates, Output Growth, and Inflation Targeting

## Inflation



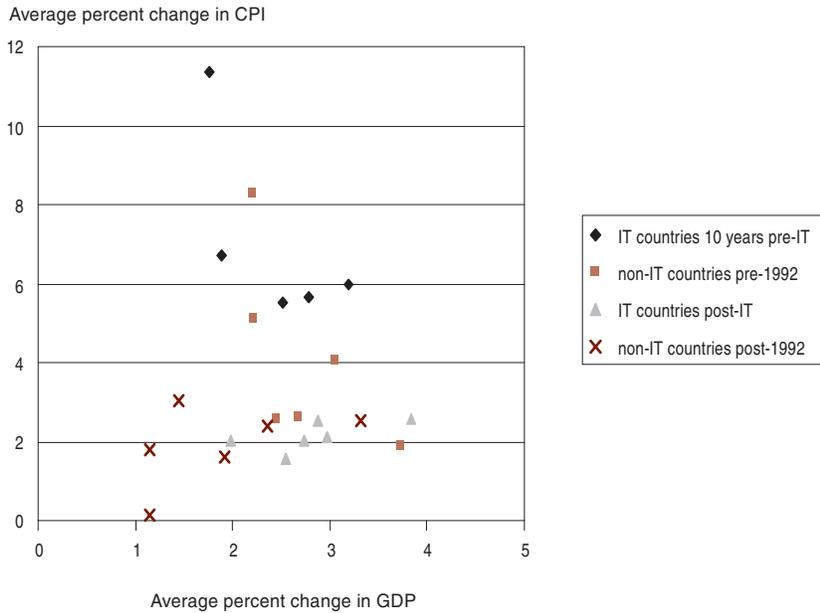
## Output



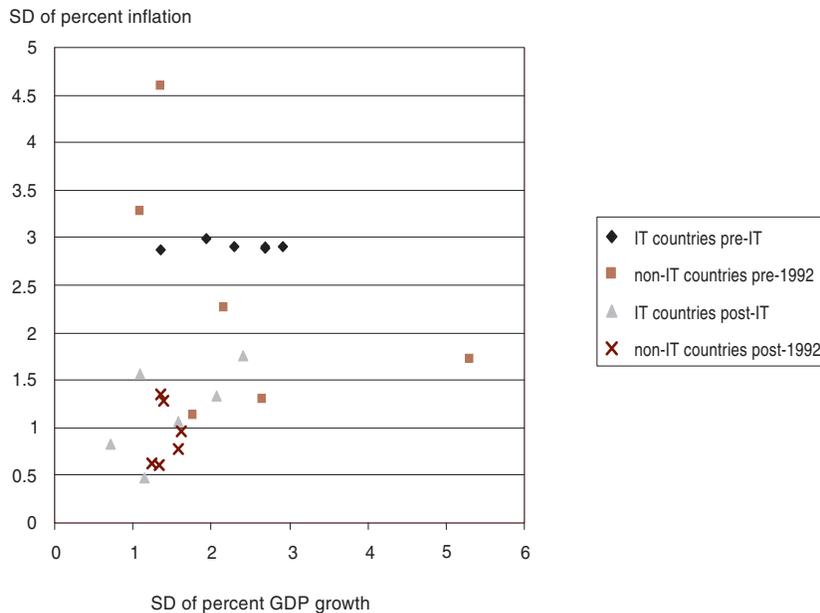
**FIGURE 2**

## Inflation and Output

Average Growth vs. Average Inflation



Standard Deviations of Growth & Inflation



to reduce their inflation rates in the second half of the sample.<sup>5</sup>

Output volatility also declined by nearly the same amount for both groups of countries, and both groups show a more favorable tradeoff between output and inflation volatility over the later sample (Figure 2). Just looking at the data in this way is informative, but it has limitations. It doesn't control for many features of the economic environment that affect inflation and output and that may be unrelated to inflation targeting. The sample size is still very small, making any definitive conclusion statistically difficult.<sup>6</sup>

For example, countries may have experienced more favorable economic shocks after they adopted inflation targeting, and merely examining economic outcomes before and after adoption could overstate the benefits of inflation targeting.<sup>7</sup> Using a control group of countries helps avoid attributing all of the improvement in inflation and output performance to the inflation-targeting framework, but it also brings its own set of interpretation problems.

In particular, there are some important differences between the inflation-targeting countries and the control group. The inflation-targeting countries are small, open economies, whereas the control group contains

<sup>5</sup> One of the convergence criteria of the Maastricht Treaty was for countries to have a rate of inflation that was less than a maximum of 1.5 percent above the average rate in the three EU countries with the lowest inflation.

<sup>6</sup> For example, more sophisticated statistical work analyzing whether inflation targeting reduces the variability of inflation is inconclusive.

<sup>7</sup> An economic shock is a factor that causes unexpected changes in economic variables. Shocks can be unfavorable, such as the devastating economic effects of hurricanes, or favorable, such as an innovation in technology that increases productivity.

some economically large countries.<sup>8</sup> Thus, the inflation-targeting countries have a greater exposure to external economic disturbances. Also, the control group may have adopted better monetary policy over the most recent period, perhaps implicitly targeting inflation, and by doing so would diminish the benefits attributable to inflation targeting. It could also be the case that the countries that adopted inflation targeting just had relatively bad luck before adoption and now have experienced a more normal set of economic shocks. If that were the case, we might incorrectly attribute the benefits of a change in luck to inflation targeting. It also doesn't allow us to examine another important aspect of inflation targeting, namely, its effect on inflation expectations.

#### A MORE DETAILED EXAMINATION

To more sharply assess the potential benefits of inflation targeting, let's review the economic literature regarding the empirical effects associated with inflation targeting.<sup>9</sup> In general, it appears that adopting inflation targeting has reduced the inflation rate and the persistence of inflation, has stabilized long-run expectations of infla-

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<sup>8</sup> A country is said to have an open economy if it engages in significant trade with other countries.

<sup>9</sup> The results are largely taken from these five papers: David Johnson; Andrew Levin, Fabio Natalucci, and Jeremy Piger; Laurence Ball and Niamh Sheridan; Refet Gurkaynak, Andrew Levin, and Eric Swanson; and Marco Vega and Diego Winkelried; as well as evidence presented in the book by Edwin Truman. These studies were chosen because they are some of the most recent and therefore have the longest data sets. They also do a relatively good job of controlling for the experience of noninflation-targeting countries. All of the studies include the five inflation-targeting countries highlighted above, but many include a wider control group and, occasionally, other, more recently industrialized countries, such as Spain, Finland, and Norway, that have adopted inflation targeting more recently.

tion, and has not had any deleterious effects on output. However, inflation targeting has probably not had any significant effect on inflation volatility.

**The Inflation Rate.** One of the primary reasons for moving to inflation targeting is to reduce inflation. From Figure 1 and Table 2, it is clear that inflation did decline after the adoption of inflation targeting. But it also declined for countries that did not adopt inflation targeting. Thus, distinguishing between the experience of countries that target inflation and those that do not requires more sophisticated statistical techniques. The basic message from such exercises is mixed. A number of studies indicate that inflation targeting was successful in reducing inflation, but that conclusion is sensitive to how the study controlled for the fact that many inflation-targeting countries had relatively high inflation before they introduced inflation targeting. It also depends on the countries in the particular study.

An interesting but controversial study by Laurence Ball and Niamh Sheridan attributes all the statistically significant lowering of inflation to the fact that inflation-targeting countries initially had higher inflation, and therefore, all one sees is a regression to the mean.<sup>10</sup> However, other studies

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<sup>10</sup> This is an important but controversial result. Many of the noninflation-targeting countries, such as the United States, placed greater emphasis on controlling inflation during the 1990s, and a number of European countries aligned their monetary policy with Germany's. Although Germany does not meet the strict definition of inflation targeting, it is widely recognized that inflation has always been a key concern of the Bundesbank. Accurately gauging the effects of inflation targeting requires significant independent variability across inflation-targeting countries. It is likely that we have insufficient data for making a sharp distinction between a simple regression toward the mean and the independent effects that inflation targeting has in lowering inflation in this set of countries. For a detailed exposition of this point, see Mark Gertler's discussion of the Ball and Sheridan paper.

that included nonindustrialized countries have found significant benefits of inflation targeting in terms of lowering inflation in both industrialized and nonindustrialized countries.<sup>11</sup> In his book, Edwin Truman notes that in this wider set of countries, there is little correlation between past inflation and the adoption of inflation targeting. The problem from the standpoint of the United States is that the experience of many of these countries may not be very relevant for understanding how inflation targeting would affect the United States. Fortunately, other types of data allow for a better understanding of the effects of inflation targeting.

**Expected Inflation.** One measure that appears to behave differently between industrialized inflation-targeting countries and industrialized noninflation-targeting countries is expected inflation. A primary motivation for adopting inflation targeting is to both reduce and stabilize expectations of inflation. If inflation targeting can accomplish this, then, in theory, it can reduce the tradeoff between lowering inflation and the loss of output.

A large set of economic models imply that when individuals expect a higher inflation rate than the rate the central bank is targeting, employment falls because higher expectations of inflation lead to higher wage demands. When these expectations are unrealistically high, the higher wages cause firms to hire fewer workers and employment falls. Firms may also set prices too high, thereby reducing the demand for their products. Both factors, which originate from erroneous views

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<sup>11</sup> The work of Marco Vega and Diego Winkelried uses econometric techniques from the treatment literature as well as a wide sample of noninflation-targeting countries, while Truman tries to uncover the effects of inflation targeting by including a wealth of control variables in his analysis.

of targeted inflation, reduce output. Examining the same set of countries as in this article, Johnson finds that inflation targeting has lowered inflation expectations. Thus, adopting inflation targeting helped those central banks coordinate the public's expectations of inflation with the targeted rate.<sup>12</sup>

Interestingly, he also finds that up until the fifth year of pursuing inflation targets, the effect of inflation targeting on reducing expected inflation gets progressively larger with each year under the inflation-targeting regime. After adhering to inflation targeting for five years, the effect gradually dissipates. This result makes sense because the credibility of a country's desire to lower inflation would be expected to increase over time. The longer a central bank sticks to inflation targeting, the more confident the public becomes that the change in policy is permanent.

Further, the lowering of expected inflation induced by adopting inflation targets varies from country to country: New Zealand enjoys the largest decline and the U.K. the least. It is interesting that New Zealand has the strictest inflation contract with the Governor of the Reserve Bank, who is solely responsible for outcomes and subject to dismissal, while at the onset of inflation targeting, the Bank of England did not have operational independence.

In complementary work that also sheds light on the behavior of inflation expectations, Andrew Levin and his co-authors examine the behavior of survey expectations of inflation in our group of inflation-targeting countries and those in a control group consisting of the U.S. and Japan and a European

average composed of Germany, France, Italy, and the Netherlands. They find that expectations of long-run inflation (five years and 10 years) are not influenced by current inflation (measured by an average of inflation over the last three years) in inflation-targeting countries, whereas long-run inflation expectations respond to changes in actual inflation in the control group. Thus, inflation expectations seem better anchored under inflation targeting.

## Some economists prefer measures of inflation expectations derived from financial market data to those derived from surveys.

Some economists prefer measures of inflation expectations derived from financial market data to those derived from surveys. Investors in bonds face serious losses if they misjudge future inflation. Refet Gurkaynak and colleagues at the Federal Reserve Board carried out research using an alternative measure of inflation expectations. They looked at the difference in yields between long-term government bonds and long-term government bonds indexed for inflation. The difference in yields gives a market expectation of inflation.

They tested to see how sensitive long-run expected inflation is to unexpected economic developments, which are measured as the difference between actual reports of various economic statistics and survey forecasts of those statistics a few days before their release. If investors are confident that the central bank will adhere to its inflation objectives, the fluctuations in current economic data should not influence investors' beliefs about long-run inflation. However, if investors believe that the monetary authority is not committed to controlling long-run inflation, economic disturbances that

increase inflation in the near term may not be offset in the future. In that case, current economic surprises could affect expectations of long-run inflation.

Unfortunately, there are only three countries for which this type of experiment can be carried out: the U.S., the U.K., and Sweden. Based on data from 1999-2005, when all three countries' inflation rates had fairly well stabilized, only in the U.S. are expectations of long-run inflation sensitive to

unexpected economic news. Thus, inflation expectations appear to be better anchored in the U.K. and Sweden than in the U.S.

An interesting result in their study is that before 1997, when the Bank of England obtained operational independence from the government, long-run expectations of inflation in the U.K. were also sensitive to economic news. Whether this result is due to operational independence providing more credibility or the fact that the Bank of England had established more credibility over time is an open question.

### The Persistence of Inflation.

One effect of inflation targeting should be to reduce the persistence of deviations in inflation from its target because any deviations of inflation from target are gradually offset, whereas there is no explicit requirement that a noninflation-targeting central bank do so. This potential benefit of inflation targeting finds support in a couple of studies.<sup>13</sup> However, the extent to which persistence is diminished varies across the two studies. One indicates that

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<sup>12</sup> Johnson used survey measures of inflation. For all but the United States, they were taken from *Consensus Forecasts*. For the U.S., he used expectations from the *Survey of Professional Forecasters*, which is conducted by the Federal Reserve Bank of Philadelphia.

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<sup>13</sup> The relevant papers are the ones by Vega and Winkelried and Levin and co-authors.

the effect of inflation targeting is quite large, while the other finds it to be rather small. The difference in results could be attributable to the use of different noninflation-targeting countries in the two studies, but more work and perhaps better data are needed as well.

**Output.** While it appears that inflation targeting in general has had economically beneficial effects on the behavior of inflation, it would be difficult to find political support for inflation targeting if, at the same time, it had deleterious effects on output. Truman finds that industrialized inflation-targeting countries experience both an increase in output growth and a reduction in output volatility relative to the experience of noninflation-targeting countries. His first analysis finds that inflation targeting raises growth and lowers the variance of growth rates. His second experiment directly tests whether the changes in relative growth rates over the two samples (pre- and post-inflation targeting) between inflation-targeting and noninflation-targeting countries are significantly different. He finds that the increase in growth in inflation-targeting countries was significantly higher than the increase in growth in noninflation-targeting countries. Similarly, he finds that the decrease in the volatility of

output growth was significantly greater for the inflation-targeting countries.

## CONCLUSIONS

A number of countries have implemented inflation targeting, and it has been in effect in a few of these countries for more than 10 years. The exact nature of the inflation-targeting framework differs across countries, and in most countries, it has evolved over time. As expressed in their testimony and speeches, monetary policymakers in the five inflation-targeting countries examined in this article all seem to be pleased with the results and have found the framework flexible enough to allow consideration of economic performance. There is no indication that inflation targeting has diminished economic performance in countries that have adopted it relative to the performance of other industrialized countries. Indeed, there is some evidence that inflation targeting has been associated with a reduction in inflation and that expectations of inflation are more stable in countries that have adopted inflation targeting. Further, inflation targeting appears to be compatible with robust economic activity.

While the empirical evidence on the effects of inflation targeting is encouraging, we must acknowledge

that the data that lend themselves to this optimistic view are limited. The experiment of inflation targeting has proceeded for a fairly short time, and thus, it has probably not been subject to all the vagaries that economies can experience. However, the testimony of central bankers who have been responsible for guiding monetary policy in the five inflation-targeting countries has been overwhelmingly positive.<sup>14</sup> Many cannot envision departing from their current practices and returning to regimes that were less explicit about underlying inflation goals. They point to numerous instances where having an inflation target both focused monetary policy and made it easier to conduct. 

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<sup>14</sup> Examples of the enthusiasm that inflation-targeting central banks have for inflation targeting can be found in several places: See the comments pertaining to the Canadian experience by the Governor of the Bank of Canada, Gordon Thiessen, and those describing the Australian experience by the Governor of the Australian Reserve Bank, Ian J. Macfarlane. Also, a favorable opinion of inflation targeting can be found in a speech by the Governor of the Reserve Bank of New Zealand, Donald Brash, delivered at the AEA meetings in 2002. Mervyn King, the Governor of the Bank of England, has also eloquently discussed the benefits of inflation targeting. For comments by members of the Riksbank, who have viewed their experience with inflation targeting favorably, see the article by Claes Berg.

## REFERENCES

- Archibald, Joanne. "Independent Review of the Operation of Monetary Policy: Final Outcomes," Reserve Bank of New Zealand *Bulletin*, 64, 3, pp. 4-14.
- Ball, Laurence, and Niamh Sheridan. "Does Inflation Targeting Matter?" in *The Inflation Targeting Debate*. National Bureau of Economic Research Studies in Business Cycles, 32, Chicago: University of Chicago Press, 2005.
- Bank of England. Monetary Policy Framework, available at: [www.bankofengland.co.uk/monetarypolicy/framework.htm](http://www.bankofengland.co.uk/monetarypolicy/framework.htm)
- Barker, Kate. "Monetary Policy in the U.K.," speech, National Association for Business Economics, Washington, D.C., March 21, 2005.
- Berg, Claes. "Inflation Forecast Targeting: The Swedish Experience," *Sveriges Riksbank Quarterly Review*, 3, 1999, pp. 44-70.
- Berg, Claes. "Experience of Inflation Targeting in 20 Countries," *Sveriges Riksbank Quarterly Review*, 1, 2005, pp. 20-47.
- Bernanke, Ben S., Thomas Laubach, Frederic Mishkin, and Adam Posen. *Inflation Targeting: Lessons from the International Experience*. Princeton: Princeton University Press, 1999.
- Brash, Donald T. "Inflation Targeting 14 Years On," Reserve Bank of New Zealand *Bulletin*, 65, 1, pp. 58-70 (speech, American Economic Association, January 5, 2002).
- Dodge, David. "Inflation Targeting: A Canadian Perspective," speech, National Association for Business Economics, March 21, 2005 ([www.bankofcanada.ca/en/speeches/2005/sp05-2.html](http://www.bankofcanada.ca/en/speeches/2005/sp05-2.html)).
- Gertler, Mark. "Comments," in *The Inflation Targeting Debate*. National Bureau of Economic Research Studies in Business Cycles, 32, Chicago: University of Chicago Press, 2005.
- Gurkaynak, Refet, Andrew T. Levin, and Eric T. Swanson. "Inflation Targeting and the Anchoring of Long-Run Expectations: International Evidence from Daily Bond Yield Data," manuscript, Board of Governors of the Federal Reserve System, June 2005.
- Johnson, David R. "The Effect of Inflation Targeting on the Behavior of Expected Inflation: Evidence from an 11 Country Panel," *Journal of Monetary Economics*, 49 (November 2002), pp. 1521-38.
- Levin, Andrew T., Fabio M. Natalucci, and Jeremy Piger. "The Macroeconomic Effects of Inflation Targeting," *Federal Reserve Bank of St. Louis Review*, 86 (July/August 2004), pp. 51-80.
- King, Mervyn. "The Monetary Policy Committee: Five Years On," speech to the Society of Business Economists, available at: [www.bankofengland.co.uk/publications/speeches/2002/speech172.pdf](http://www.bankofengland.co.uk/publications/speeches/2002/speech172.pdf)
- Kuttner, Kenneth N. "A Snapshot of Inflation Targeting in Its Adolescence," paper, Reserve Bank of Australia, available at: [www.rba.gov.au/PublicationsAndResearch/Conferences/2004/Kuttner.pdf](http://www.rba.gov.au/PublicationsAndResearch/Conferences/2004/Kuttner.pdf)
- Macfarlane, Ian J. "Australia's Experience with Inflation Targeting," in *Stabilization and Monetary Policy: The International Experience*, Banco de Mexico (November 2000).
- Mishkin, Frederic. "From Monetary Targeting to Inflation Targeting: Lessons from the Industrialized Countries," in *Stabilization and Monetary Policy: The International Experience*, Banco de Mexico (November 2000).
- Reserve Bank of New Zealand. "What Is the Policy Targets Agreement?" Fact Sheet No.3, RBNZ, available at: [www.rbnz.govt.nz/monpol/pta/0127027.html](http://www.rbnz.govt.nz/monpol/pta/0127027.html).
- Santomero, Anthony M. "Flexible Commitment or Inflation Targeting for the U.S.?", *Federal Reserve Bank of Philadelphia Business Review*, Third Quarter 2003.
- Santomero, Anthony M. "Monetary Policy and Inflation Targeting in the U.S.," *Federal Reserve Bank of Philadelphia Business Review*, Fourth Quarter 2004.
- Sherwin, Murray. "Institutional Framework for Inflation Targeting," speech, Bank of Thailand symposium on "Practical Experiences on Inflation Targeting," October 20, 2000 (<http://www.rbnz.govt.nz/speeches/0097459.html>).
- Stevens, Glenn. "Inflation Targeting: A Decade of Australian Experience," *Reserve Bank of Australia Bulletin* (April 2003), pp. 17-29.
- Svensson, Lars E.O. "Independent Review of the Operation of Monetary Policy in New Zealand: Report to the Minister of Finance," February 2001.
- Thiessen, Gordon. "The Canadian Experience with Inflation Targeting," in *Stabilization and Monetary Policy: The International Experience*, Banco de Mexico (November 2000), pp. 85-90.
- Truman, Edwin M. *Inflation Targeting in the World Economy*. Institute for International Economics, Washington, D.C., 2003.
- Twaddle, James. "The Reserve Bank of New Zealand Amendment Act 2003," *Reserve Bank of New Zealand Bulletin*, 67, 1, pp. 14-33.
- Vega, Marco, and Diego Winkelried. "Inflation Targeting and Inflation Behavior: A Successful Story?," manuscript, February 2005.