

Can Inflation Be Too Low?

In Chapter 29 of the textbook we examine in detail how the Bank of Canada operates its inflation-targeting framework, and also review the Bank's recent policy experience. We show that the Bank has had considerable success since 1991 in maintaining a relatively low and stable rate of inflation. In particular, the Bank has aimed to keep the annual rate of CPI inflation close to the 2-percent midpoint of the 1–3 percent target range, and except for a few occasions, the Bank has succeeded.

In 2006, the Bank of Canada and the federal Department of Finance renewed the inflation targets for another five-year period, and these targets will expire in December 2011. Though the renewal agreement stated that until 2011 the details of the inflation targets would be unchanged, the Bank also announced that it wanted to explore the costs and benefits of reducing the targeted rate of inflation, with the possibility that the inflation target would be reduced after 2011.¹

¹ See "Renewal of the Inflation-Control Target: Background Information," Bank of Canada, 2006. Available at www.bankofcanada.ca.

Some economists argue that this possibility should indeed be explored. In their view, any positive target for inflation, if achieved, guarantees that the real value of money will continue to be eroded. For workers and firms that have the ability to *index* their earnings to the rate of inflation, a predictable (positive) rate of inflation is not a large problem. But for people whose incomes are fixed in nominal terms—as is the case for many retired people living off their accumulated savings—any amount of inflation simply reduces their real purchasing power. For people in this situation, an inflation target of zero makes obvious sense.

Other economists have argued that the issue is not so simple, and that significant problems may arise if the central bank decides to target too low of an inflation rate. In the following discussion we explore three possible arguments for the Bank of Canada *not* to reduce its inflation target below 2 percent.

The Risk of Deflation

The first possible problem is the greater risk that the economy experiences *deflation*. Deflation means that the price level is *falling*—a negative rate of inflation. The concern is that the closer the central bank's inflation target is to zero, the more likely it is that some shock could push the actual inflation rate below zero.

Deflation is considered a serious problem partly because of a notable historical episode in which it played a leading role. During the opening years of the Great Depression, from 1929 to 1932, Canadian real GDP *fell* by almost 30 percent and the price level *fell* by 20 percent. Though these movements in real GDP and the price level might be explained relatively simply in our macro model by a large, negative shock to aggregate demand, the historical experience has nonetheless created concerns about the possibility of deflation—even in the absence of any large negative *AD* shock.

Many economists, however, argue that the experience of the Great Depression does not illustrate dangers about deflation *per se* but instead illustrates the problems created by large economic shocks. In their view, the deflation observed between 1929 and 1932 was not the *cause* of the economic problems; it was a *result* of a large reduction in aggregate demand. Without large shocks to aggregate demand or aggregate supply, a

low and relatively stable rate of *deflation* is no worse (or better) for the economy than a low and relatively stable rate of *inflation*.

In addition, many economists dismiss the potential danger of deflation for the simple reason that the central bank would be targeting a specific annual rate of inflation—maybe zero, maybe 1 percent, maybe 2 percent. And since the Bank of Canada has shown that it is capable of achieving its inflation targets consistently for almost 20 years, there is little reason to think that it will be either unable or unwilling to continue this commitment in the future. In other words, sustained deflation is not a significant possibility if the Bank is targeting either zero percent or 1 percent inflation.

A Lower Bound for the Overnight Interest Rate

A second potential problem with a very low inflation target is that monetary policy may become ineffective in some situations because the central bank may be unable to reduce its policy interest rate enough to counteract the effects of large negative shocks.

Here is the argument. If the Bank chooses a very low inflation target, the low rate of inflation will generally lead to low nominal interest rates, including the overnight interest rate.² If the economy at some point experiences a large negative shock to aggregate demand, the Bank would want to respond by loosening its monetary policy, reducing its target for the overnight rate. A potential problem arises if, in such a world of very low inflation, the Bank's target for the overnight rate is already very close to zero. In this case, the size of the *AD* shock may dictate that the Bank reduce its target for the overnight rate to zero and *then still further*. But the overnight rate cannot be negative because no lender would lend money if they had to pay the borrower to accept their loan; it would be better to keep the money and not lend it at all. In this situation the Bank would be unable to implement an expansionary monetary policy as is required to sufficiently counteract the negative shock to aggregate demand.

² Recall that the nominal interest rate is equal to the real interest rate plus the expected rate of inflation. If the real interest rate is relatively unaffected in the long run by changes in the Bank's inflation target, then nominal interest rates will move together with inflation. Thus, lower inflation in the long run brings about lower nominal interest rates.

This is precisely the situation the Bank actually faced in early 2009. The global financial crisis that began in 2008 created a significant slowing of world economic growth that year. By early 2009, most economies were in deep recession, with real GDP declining faster than had been recorded at any time since the Great Depression. The Bank of Canada responded by lowering its target for the overnight interest rate, but by April 2009 it had reached what it considered to be its lower bound—0.25 percent.

At this point, however, the Bank announced that, if there was a need for even more monetary stimulus in the future, it was prepared to enter the financial markets and directly purchase either government or private-sector securities, and to do so in a manner that would directly increase the level of reserves in the banking system. This approach to the conduct of monetary policy is now known as “quantitative or credit easing.”

As of late 2009, the Bank had not yet felt it was necessary to undertake these policies. But there is now a broad consensus among economists that this approach, if undertaken, will indeed allow the Bank of Canada to continue an expansionary policy despite having already reached the lower bound on nominal interest rates. In other words, the lower bound on nominal interest rates does not present an insurmountable challenge for monetary policy.

Downward Nominal-Wage Rigidity

In recent years, some economists have argued that maintaining inflation at very low levels may actually lead to a permanent increase in unemployment. These economists argue not only that the process of reducing inflation involves *temporary* costs in terms of reduced output and higher unemployment (see the detailed discussion of this point in Chapter 30), but more controversially that there may be *permanent* costs associated with maintaining inflation at very low levels.

The possibility that very low inflation may permanently raise unemployment is a view originally put forward in 1972 by the late James Tobin, an economist from Yale University who was awarded the Nobel Prize in economics in 1981. In Canada, the argument has been made by Pierre Fortin of the Université du Québec à Montréal.³ Central to Tobin's and Fortin's arguments is the importance of downward rigidity in nominal wages—a more extreme version of what we called *wage stickiness* in Chapter 24. Specifically, these economists believe that nominal wages will rise in the presence of excess demand but they will not fall at all in the presence of excess supply. Why does this wage rigidity lead to higher unemployment when inflation is very low but not when inflation is higher?

³ The resurrection of Tobin's ideas is found in G. Akerlof, W. Dickens and G. Perry, "The Macroeconomics of Low Inflation," *Brookings Papers on Economic Activity*, 1996. See also P. Fortin, "The Great Canadian Slump," *Canadian Journal of Economics*, 1997.

Their argument is rather involved, and to understand it we need to proceed carefully. The argument is summarized by the following points:

- First, the various sectors within the economy are continually being subjected to demand shocks. At any given time, some sectors are expanding while others are contracting. These shocks lead to changes in the demand for labour in the various sectors and thus necessitate changes in *real* wages, rising in expanding sectors and falling in contracting sectors.
- Second, if *nominal* wages cannot fall because of wage rigidity, then the only way *real* wages can fall in the contracting sectors is if the price level rises. In other words, inflation is needed to bring about the reduction in real wages required as part of the labour market adjustment in the contracting sectors.
- Third, inflation at moderate levels (3–5 percent) is high enough to bring about the necessary drop in real wages in most of the contracting sectors. This is because the pattern of demand shocks across sectors is such that even the sectors with the sharpest contractions require real-wage declines of only 5 percent.
- Finally (and this is the key point), if inflation is very low (below 2 percent), the contracting sectors *cannot* achieve the necessary reduction in real wages through inflation. Firms will instead choose to lay off their workers. Thus, when inflation is very low, the layoffs in the contracting sectors will outnumber the newly hired workers in the expanding sectors. The result is *permanently* higher unemployment.

This view is not shared by all economists.⁴ The main point of contention is the cause and extent of the downward rigidity in nominal wages. Many economists believe that while nominal wages may be very slow to fall in response to excess supply, this wage stickiness can be attributed to the fact that workers have lived in an inflationary environment for many years. In such an environment, if prices have been rising at 5, 8, or 10 percent annually, it is easy to understand why workers are reluctant to accept an actual decline in their nominal wages. But as low inflation becomes a more permanent part of the economic environment (Canada has now had inflation at or near 2 percent for almost 20 years), workers will naturally come to view occasional reductions in nominal wages as one of the unpleasant but inevitable aspects of economic life. If this is true, then the downward rigidity of nominal wages will eventually disappear as Cana-

da's experience with low inflation continues. In this case, real GDP will eventually return to Y^* , unemployment will eventually return to U^* , and low inflation will not involve permanent costs.

⁴For an assessment and rebuttal, see S. Hogan, "What Does Downward Nominal-Wage Rigidity Imply for Monetary Policy?" *Canadian Public Policy*, 1998.

Between 2006 and 2011, the end of the current inflation-control targets, the Bank of Canada's economists will continue their research on the costs and benefits associated with reducing the inflation target. The three arguments discussed here will be explored in great detail, both theoretically and empirically, so that any change in policy by the Bank can be based on the best possible information.