Working Paper 9005

IN DEFENSE OF ZERO INFLATION

by William T. Gavin

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FOREWORD

On March 5, 1990, the C.D. Howe Institute sponsored a workshop to discuss research on the Bank of Canada's monetary policy goal of zero inflation. The discussion was organized around papers published in *Zero Inflation: The Goal of Price Stability*, edited by Richard Lipsey and published in March 1990 by the C.D. Howe Institute in Toronto. In the first chapter, Lipsey describes the zero inflation policy of the Bank of Canada and outlines the main issues examined in the other papers, written by Douglas Purvis, Peter Howitt, Pierre Fortin, and David Laidler.

In general, these papers applaud the Bank's commitment to an explicit and low inflation target, but none was strongly in favor of zero as the particular target rate. The most compelling argument against zero was the implication from conventional Keynesian macroeconomic theory that getting to zero would involve a potentially large one-time loss of output. Most other participants at the workshop were even more reluctant to support the Bank's zero inflation policy than were the contributors to the Lipsey volume.

This paper represents a dissenting opinion prepared at the invitation of the C.D. Howe Institute. I am grateful to Thomas E. Kierans, president of the Institute, and to Robert C. York, senior policy analyst, for giving me the opportunity to participate in this workshop.

"I shot an error into the air,

it's still going ... everywhere."

Lazarus Long, in Robert Heinlein's Expanded Universe

I. Introduction

The papers in Lipsey (1990) support price stability in general, but give only qualified support to the zero inflation policy adopted by the Bank of Canada. Although many details of the Bank's zero inflation policy are not clearly specified, I believe that the benefits of switching to a regime of price stability can easily exceed the costs of getting there, especially if the transition is clearly perceived and fully credible.

"Zero inflation" is a phrase that attracts much attention. Some confusion arises because the operational meaning of the phrase depends on whether authorities are trying to target ex ante expectations or the ex post realization of inflation. Suppose that, each month, monetary policy were set so that the expected inflation rate was equal to zero. Using this definition, the price level would have no anchor--it would drift about in response to real shocks and control errors because the central bank would not be responsible for reversing past deviations from zero. On the other hand, if policy is conducted to achieve zero inflation (over a given time horizon), then there could be short periods of rising and falling prices, but the inflation rate would average to zero over the long term. Using this definition, the zero inflation policy is equivalent to a price level target.

A zero inflation policy is a purposeful expansion and contraction of the quantity of money undertaken in order to keep the value of money stable. The idea of the value of money is unique: No single market determines it. Rather, its value is determined by the things it will buy in millions of transactions occurring in many markets. Because the value of money cannot be easily or precisely measured, a central bank has considerable flexibility in conducting monetary policy. The disadvantage of this uncertainty is that the bank can never know positively how a particular policy action will affect the price level.

This uncertainty is also reflected in how the price level is measured. Any particular price index will always contain some variation because of measurement error. As Pierre Fortin clearly explains, many conceptual and practical problems interfere with the measurement of a true price index.[1] All of the factors affecting supplies and demands in a complex market economy cause relative price changes that will induce some error in reported price indexes.

But what does this mean for policy? All measuring devices contain some error. What is relevant is that the measurement error be small relative to economically important changes in the index. Under a zero inflation policy, citizens should always expect that what goes up must come down and therefore recognize that variation in the aggregate price level should not affect economic decisionmaking.

II. The Stable Money Movement

Although the idea of a price level target seems radical today, 60 to 100 years ago the concept was very popular among economists. Historically, economists have always strongly supported a stable monetary standard. Early standards were based on precious metals: The first advocates of stable money supported fixing the value of money in terms of a fixed weight and fineness in the metal used to make coins. Later, as foreign trade became more important, many supporters urged fixing the value of money relative to a foreign currency that was based on a precious metal standard.

The most important monetary policy issue during the early part of this century was the debate between those who wanted a gold standard and those who believed that changes in the relative price of gold caused financial panics and severe economic fluctuations. In a 1934 classic, *Stable Money: A History of the Movement*, Irving Fisher traces the evolution of the idea of a monetary standard based on a price index. Therein he lists an impressive number of economists and legislators from around the world who advocated a monetary system that would stabilize a price index, and drawing just from the 1800s, he describes 28 of their specific proposals.[2]

Economists' support for a monetary system that would stabilize a price index of consumer goods continued to grow during the early 1900s. But despite this widespread support, I could find only one example of a central bank actually adopting a price index target as a monetary policy goal.[3] In late September of 1931, the Swedish government and the Riksbank left the gold standard and announced that they would use all means available to stabilize

the purchasing power of money. They immediately began to collect information that enabled the construction of a consumer price index (CPI) on a weekly basis. The Riksbank's enthusiasm for adhering to the CPI target was tempered by its desire to fix the Swedish krona vis-a-vis the British pound. Nevertheless, between December 1931 and the end of 1936, the CPI fluctuated only within 3 points of 100.

This example makes clear that targeting the CPI would be a feasible policy, even in a small open economy. However, this evidence also raises the question of why modern economists have abandoned the goal of a stable monetary standard.

III. Why is There so Little Support for Zero Inflation Policies?

Prior to World War II, there was widespread support among economists for a constant price level target; however, much of that support has disappeared. There are at least three plausible explanations of why support for zero inflation policies is limited.

First, in the post-World War II environment, relatively stable prices relieved the earlier pressure to adopt a price level target. The stable money movement had been driven by the experience of wide price variability under the gold standard. The dollar-gold standard associated with the Bretton Woods agreement seemed to solve one of the major problems of the pre-World War I gold standard. Even though the agreement proved to be unstable, the price experience was not volatile enough to generate widespread interest in monetary reforms until the 1970s, when the monetarist movement picked up the crusade

for price stability. Now that people have lost faith in the monetarist policy prescription, there seems to be renewed interest in price level targeting.

Second, nonmonetary models have dominated the frontier in macroeconomic research for almost two decades.[4] These microfoundation models usually exclude the important reasons for having money. Because the quantity of money does not play an important role, following an inefficient monetary policy does little damage to these model economies. To capture an important role for money, some sort of friction affecting trades in decentralized markets must occur.

If one recognizes that the existence of money is inextricably tied to the functioning of market economies, then it is easy to see why disrupting the efficiency of the monetary system can cause great harm. Peter Howitt recognizes this issue and notes that if inflation reduces market efficiency, then one ought to observe a negative correlation between measures of factor productivity and inflation.[5] He cites evidence presented by Jarrett and Selody (1982) that inflationary policies have been associated with significant reductions in productivity growth in the Canadian economy. The welfare implications of this result are overwhelming--so much so that most people are incredulous. (Note that Howitt gave little weight to this evidence in his final cost-benefit analysis.)

The third and, I think, the most important reason why there is so little support for zero inflation is because the conventional macroeconomic model suggests that policymakers must slow real growth and cause unemployment in order to reduce inflation. Conversely, this framework also suggests that

policymakers can stimulate real growth and can lower unemployment by raising the inflation rate. Although this paradigm is being challenged by economists at the frontier of macroeconomic research, it is the model familiar to most policy advisors and practicing macroeconomists.

Douglas D. Purvis describes the monetary policy implications resulting from this standard framework.[6] Because these basic premises are so important to the argument against zero inflation, we should take a closer look at their logical and empirical support. Let us consider what Purvis calls "some core truths about monetary policy."

Monetary policy has strong effects on the economy: Too much money stimulates the economy and too little restricts it.

This "core truth" has gained wide acceptance because raw statistical correlations show that money and real output are positively correlated; however, intense debate surrounds this statement in academic circles. The relevant question is whether moderate changes in money growth engineered by a discretionary money supply policy can enhance real growth.

Statistical evidence is ambiguous because central banks actively accommodate money demand. While economic decisionmakers try to follow countercyclical policies, their automatic response is usually to follow the economy upward in an expansion (with faster money growth) and downward in a recession (with slower money growth). This behavior is most easily seen in the way central banks accommodate seasonal fluctuations. An induced response

of money growth to economic activity is also a natural result of bureaucratic inertia combined with the use of money market interest rates as policy guides. By smoothing nominal interest rates, central banks tend automatically to accommodate the demand for money, including the demand for money induced by changes in economic activity.

To know whether this first "core truth" is well founded in the evidence, money supply and money demand shocks must be identifiable; however, no one has successfully sorted out these factors in the post-World War II data.

The immediate effects of monetary policy are on asset markets—interest rates, exchange rates, and stock prices.

In each of these cases, there is frequent trading and frequent posting of prices. Yet we know that, even in these markets, there is a form of price stickiness. Consider the New York bond trader who makes a morning deal to buy $50 million in Treasury securities at a fixed price. The deal will not be consummated until late in the day. Meanwhile, prices will change. When the bonds are delivered, the transaction will include a wealth transfer due solely to price changes that occurred during the day. How is this wealth transfer any different from the wealth loss a worker suffers when inflation rises unexpectedly after a labor contract has been signed? Just because markets clear only infrequently does not mean that prices are fixed or that new contracts will be made at old prices. The next time the market clears (whether a financial, labor, or goods market), prices should be expected to

reflect the effects of the policy change.

The effects of monetary policy on real variables such as gross domestic product (GDP) and employment occur with a lag that can be long and variable —the peak effect can often occur after a period of two years or more.

"Long and variable" means that the relationship is unidentifiable. If one believes that money supply actions have a positive effect on real output, then he or she must also believe that the effect is long and variable, because there is little evidence of a systematic relationship.

After an extended period—say, five years or more—the effects of monetary policy fall exclusively on the price level.

This is certainly conventional wisdom. However, there are some good reasons to think that a credible change in monetary policy would affect prices much more quickly and, therefore, have less effect on output. Studies by Irving Fisher (1918, page 5) in the early part of this century indicated that the lag from money to prices was less than three months.

> It was in August, 1915, that the quantity of money in the United States began its rapid increase. One month later prices began to shoot upward, keeping almost exact pace with the quantity of money. In February, 1916, money suddenly stopped increasing, and two and a half months later prices stopped likewise. Similar striking correspondences have continued to occur with an average lag between the money cause and the price effect of about one and three-quarters months.

Fisher's description of a short lag was apparently only one of many by contemporary observers. A recent econometric study using data from 1894 to 1909 confirms Fisher's conclusion about the length of the lag.

> Event analysis of panic episodes, ARMA representations of gold flows, and macroeconomic simulation models of international adjustment using monthly data all indicate that adjustment to transaction-balance shocks was essentially complete within three months.
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> .
> .
> .
>
> Our results confirm the responsiveness of prices in the short run. In particular, prices did not lag related movements in output.
>
> Calomiris and Hubbard (1989), pages 430 and 431

Although this evidence pertains to century-old data, there is no reason to think that markets are less efficient today. On the contrary, advances in information and communication technologies suggest that the relevant lags should be even shorter today. I think that a long lag is measured incorrectly today for at least two reasons. First, monetary authorities often seem to behave as if their goal is to ensure that no econometrician will ever identify an independent money supply shock. If money supply shocks are small relative to real shocks, then the real shocks that affect output are also important sources of short-term variation in the price level. The estimated lag from

money to prices will be contaminated by real economic processes that affect money, prices, and output over various horizons.

The second reason for the estimation of a long lag is that we, as econometricians (or chartists), look backward while economic agents look forward. If the past behavior of monetary authorities is an accurate predictor of future behavior, then the econometrician will forecast well when using models with long lags, but the measured lags will have little connection with the structural mechanisms linking money to the real economy. Estimated models will greatly overstate the output costs of reducing inflation via a credible change in monetary policy.

In order to lower interest rates in the medium term, the central bank has to raise them in the short term.

A distinction should be made between a change in the policy stance within a given regime and a change in regime. This statement seems to be a reasonable description of the dynamic relationship expected within the current discretionary regimes of both the United States and Canada. Under current macro wisdom, the central bank has an incentive to mislead the public about its true inflation goal. If people expect inflation to be low, but the central bank delivers high inflation, then conventional wisdom predicts an economic boom. Given this perverse incentive structure, it would take a longer period of higher interest rates to reduce inflation than would be the case if a credible zero inflation policy were introduced.

The effects of monetary policy depend heavily on expectations in the market and on the credibility of the monetary authority.

I agree completely. The reason a transition to zero inflation would be costly is that people would not expect the policy change to succeed and would hedge against the day it was abandoned. One important problem that needs to be considered in a transition to a credible zero inflation policy is the fixed interest rate on existing contracts. Whether the Bank of Canada's disinflation policy will cause a recession depends very much on whether the policy is credible and how quickly zero is achieved relative to the maturity structure of outstanding debt. As noted by Richard Lipsey (1990) in his introduction, the chance that the policy will be abandoned is a major source of the cost of the policy. Presumably, the Canadian government could reduce these costs by enacting legislation that would institutionalize the goal of price stability.[7]

Although the relevance of conventional macroeconomic wisdom can be debated, it should be noted that, even if the conventional wisdom were true, unexpected inflation is costly. The cost of disinflation lies in the unexpected nature of the policy. If the policy regime is changed, there will be a one-time cost to pay. If the regime is not changed, then there will be repeated episodes of unexpected fluctuations in the price level, resulting in ongoing welfare losses that will almost surely overwhelm the one-time costs of switching to a zero inflation regime.

IV. The Purpose of Policy is to Improve the Standard of Living

Pierre Fortin wrote that the cardinal economic objective of government should be to improve the standard of living of its people. This seems clear. The role of the central bank is to foster a monetary system that creates the best environment for achieving the highest standard of living.

In my judgment, the papers presented in Lipsey (1990) understate the costs of inflation and overstate existing knowledge about the costs of eliminating inflation. The standard macroeconomic model was not designed to do welfare analysis. Not only is it difficult to interpret the welfare implications of macroeconomic predictions, but the conventional macroeconomic framework is designed to analyze monetary policy actions within a given regime, not to evaluate a change in regimes.

The first element of my argument in support of zero inflation is that rules matter. Economics is a way of thinking about how society's rules can be shaped to promote individual freedom and high living standards. By protecting the civil liberties and property rights of individuals, we promote economic efficiency and raise the average standard of living. Wherever possible, the role of government should be to establish the rules, not to interfere with the operation of the system within those rules. In making recommendations about short-run policy actions, economists must be careful not to change inadvertently the nature of the rules governing the economy.

The extreme alternative to this model of a free-market economy based on rules is the centrally run economy. But all free-market economies are

mixtures of rules and central planning. As policymakers and economists, we often lapse into thinking about policy from the point of view of a central planner. The Greek root of the word "economy," *oikonomos*, means "household manager." Many economists think that their job is to help the political leader "manage the household" of the economy given the set of rules inherited from the past. They tend to concentrate on macro variables such as aggregate demand and total employment. Their main concern becomes the manipulation of policy levers to engineer desired outcomes for these aggregates. Herbert Stein (1989) compares managing the economy to flying a Boeing 747, implying that the economist's role is like that of the navigator or pilot. I would rather think of the economist as the designer of aviation regulations and air-traffic control systems. In my opinion, we need economists to design the rules, not to run the system.

Several authors refer to hysteresis in unemployment and introduce the idea that temporary demand management policies may affect the unemployment level permanently, or at least for a very long time. Indeed, one is as likely to find persistent low (or high) growth across different sectors in a given economy as in similar sectors of different countries. The important point here is that national policies do seem to affect an economy's growth rate. Macroeconomists concerned with hysteresis in unemployment tend to attribute the idiosyncratic aspects of a nation's economy to aggregate demand management.

Neither the theory nor the empirical evidence is sufficient to justify modifying policies based on these ideas about hysteresis in unemployment.

A recent but singular event confined to a few countries should not be allowed to overwhelm an abundance of contrary evidence. Furthermore, it is still not fully understood to what extent the persistence of unemployment can be attributed to institutions affecting the labor market. We know that generous unemployment compensation, plant-closing laws, and widespread unionization, for example, can explain some of this experience. Economists can build particular models in which temporary policies can generate permanent effects, but these models have little generality.

Consider another explanation for persistent low growth and high unemployment. Today, the standard of living in free-market economies is much higher than it is in countries that have been under central planning. The rules matter: Countries with inefficient rules have lower real growth rates. These rules usually take the form of an improper mix of tax laws, entry regulations, subsidies to business, weak antitrust laws, tariffs, and erratic inflation policies, to cite a few examples. There are good economic explanations for why these factors affect real growth and living standards in a country. If monetary policy influences the real growth rate and the persistence of high unemployment rates, it probably does so through the microeconomic channels discussed by Peter Howitt in chapter 3 of Lipsey (1990), not through macroeconomic channels. If so, inflation and uncertainty about the price level inhibit, not stimulate, real growth. Empirical evidence for this can be found in the multi-country studies of real growth by Kormendi and Meguire (1985), Grier and Tullock (1989), and Barro (1989). They have found that higher inflation or uncertain inflation tends to reduce output

growth trends.

Although particular monetary policy actions within a given set of rules may be neutral, output growth and the standard of living can, in principle, be affected by the particular rules adopted. Under current monetary rules in the United States and Canada, the inflation rate is allowed to vary in response to both real shocks and political pressures. This variability introduces an uncertainty about future inflation that is likely to reduce economic efficiency and the real growth rate in the same way that inefficient economic rules lower living standards. The central banker's flexibility to choose the inflation rate also is an opportunity to tax currency and nominal bonds and to redistribute wealth. There is no reason to think that the central banker can make these decisions any more effectively than the central planner can run the economy.

Zero inflation policies are not meant to upset the established monetary system; rather, they are intended to limit discretion. Consider an analogy with the legal system. A legal system is a combination of rules and discretion. It includes judges who must face new and unprecedented cases. Such cases might be rare, but they require experience and sound judgment. In theory, good judgment survives a review process and becomes part of the law. Likewise, experienced central bankers are expected to make judgments in new and unprecedented cases. These judgments also go through an informal review process. But to prevent the system from sliding into one of arbitrary authority and central planning, the central bank's actions must be constrained by rules.

V. An Explicit Zero Inflation Policy

The biggest problem monetary policymakers face in achieving price stability is their apparent inability to commit to long-term goals. This lack of commitment results, in my opinion, from the fact that most policymakers and many economists do not really believe that commitment to an explicit objective would be optimal. Economists typically cite our ignorance about all of the contingencies that might arise as an argument against monetary policy rules.

In our 1989 manuscript, "A Flexible Monetary-Policy Rule for Zero Inflation," Alan C. Stockman and I offer an explicit yet flexible rule for reaching and maintaining zero inflation. We consider a situation in which the central bank is legally required to adopt an explicit target path for the CPI level extending into the indefinite future. We then define a narrow band extending above and below the target path within which the price level may fluctuate (see figure 1). The primary objective of the central bank would be to keep the CPI within this band.

The band should be wide enough so that the central bank could use a variety of procedures to keep the index within it. The Swedish Riksbank used a combination of discount-rate changes, gold purchases and sales, and foreign currency operations to keep the CPI near 100. The Swedish experience is shown in figure 2 (our proposed band is imposed on the historical data).[8]

A band of 6 percent--an area 3 percent above and 3 percent below the level of the target--should be sufficient for either the U.S. or Canadian economies. The CPI is unlikely to move outside of it unless the central bank

intentionally deviates from the target path. Even if the CPI were to move outside of the band, actions taken to bring it back in should be explainable by monetary authorities and obvious to citizens.

We do not recommend an immediate change to a zero inflation policy. Rather, we would go slowly, beginning with the actual CPI for the previous year and letting the target path rise by the expected inflation rate in the current year (in our illustration, the path was allowed to rise by 5 percent in 1990). Then we would reduce the growth rate of the target path by 1/2 percent each year until the target inflation rate was zero. To improve communication about the target and the policy stance, the index would be normalized to 100 when inflation in the target path was zero.

One could choose a faster path for disinflation. Most advocates of zero inflation policies recommend achieving zero within five years. Their reasoning is simply that gradual policies may not be credible. The noise in the CPI, those unavoidable and unexpected changes associated with real shocks, may be large relative to the incremental changes that would accompany a gradual deceleration. Witness the Canadian experience. The Bank of Canada claims to be on a path toward zero inflation. Yet, in 1989, inflation rose above 5 percent after having been on a trend of 4 percent for several years. If the policy is stated in terms of inflation and not price level, then the target-path reductions must be large relative to noise in the index.

We think it is essential for credibility to target the price level. Even if analysis showed that, for economic reasons, one would prefer short-run inflation targets in which past errors were ignored, we believe that political

considerations favor a price level target. At any point, there would be an incentive for debtors to lobby for ease while creditors lobby for restraint. Random shocks to the economy would cause the price level to rise or fall from one period to the next. The public could never be sure whether a given deviation from target was due to an exogenous shock or the result of capitulation to political pressures. If the target is stated in levels, this ignorance would be immaterial.

We also think that setting a price level target is important because it represents an anchor--a benchmark that the public could use to monitor central bank behavior. The central bank could begin to build credibility during the first year of the transition, even before it begins to lower the inflation rate. People merely would need to watch how the bank responds to deviations of the price level from target, and listen to how it explains its actions to the government.

Setting the goal in terms of a multi-year path for the price level eliminates the most important objection to a gradual disinflation policy; that is, the objection that gradual declines in the inflation goal are not credible because they are small relative to noise in the index. Eliminating this objection is important because there are some advantages to going slowly. First, a slow transition does not necessarily require any change in the short-term policy stance. This is consistent with our emphasis on taking a long view. Second, any abrupt change in economic policy is likely to cause an arbitrary redistribution of wealth; a gradual transition would reduce the size of this redistribution. Third, any change in policy carries some risk of

disrupting the flow of economic activity. A rapid reduction of inflation might induce a recession, whereas the very gradual deceleration that we propose reduces the chance of an associated recession.

The proposed policy would not prevent short-term movements of the price level; we do not intend it to. But it would prevent long-run inflation, while long-term interest rates would fall. The rate on perpetual bonds in Sweden during the 1930s fluctuated between 3 and 4 percent throughout the period of zero inflation. If the central bank, in alliance with other parts of government, were to commit to this type of rule, we think that long-term rates would fall almost immediately.

Our proposed zero inflation policy need not change the daily operations of the Bank of Canada or strategy agreed upon at policy meetings. Indeed, this rule would have no visible effect on central bank activities if the CPI stayed within the proposed band.

Additionally, the central bank would not be prevented from conducting effective countercyclical policy. More likely, its ability to conduct such policy would be enhanced. Currently, the public cannot distinguish between a countercyclical policy and a changed inflation goal. Public skepticism limits the ability to conduct the former.

Our rule would not prevent the Bank of Canada from acting as the lender of last resort or responding appropriately to financial crises. As long as the CPI remained within the band, no new constraints on policy would be effected. In an emergency, the central bank could increase the money supply by any amount. It should be noted that an inflating economy is a crisis-prone

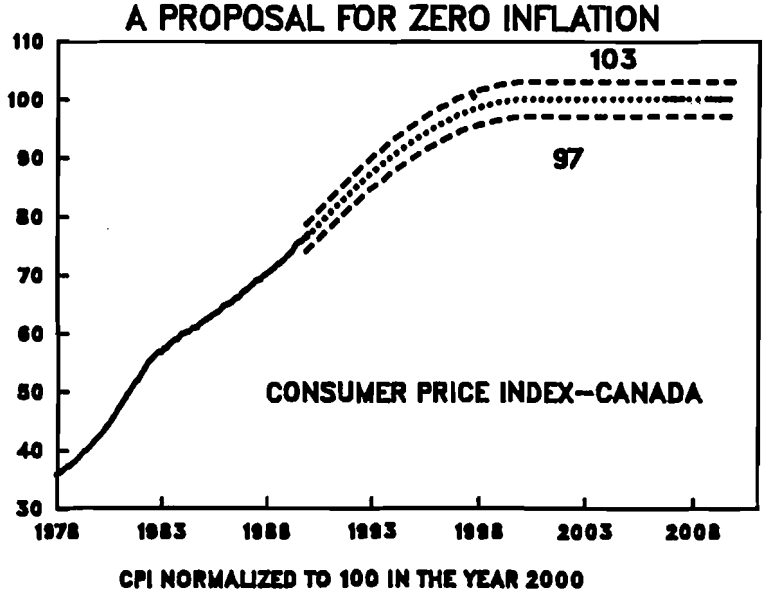
economy. Many of the problems that we in the United States have had with the savings and loan industry in the 1980s would not have occurred if it were not for the inflation of the 1970s.

Stockman and I include a somewhat complicated rule for the monetary base that would apply in those instances when the CPI moves outside of the band. In order to enforce the rules, others have recommended tying the central bankers' compensation or tenure to the success of the zero inflation policy. I do not think that such devices are necessary: If the government committed to a goal of price stability, no other incentive would be required for success.

VI. Conclusion

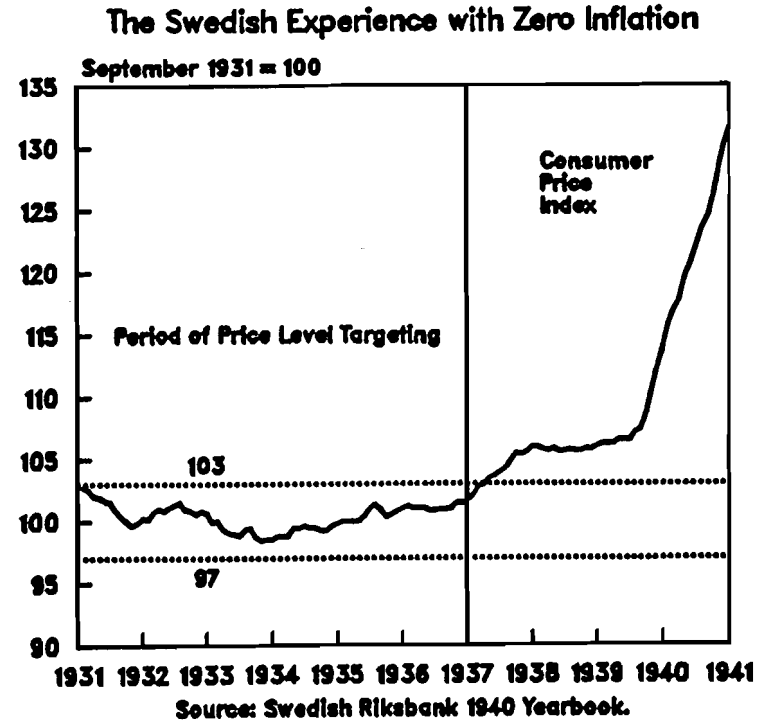
In what kind of a world shall we live? Market economies and monetary systems are institutions built by people. These institutions can serve our interests or they can be allowed to run amok. If we want to live in a world in which we understand monetary policy and the circumstances in which it is likely to be changed, then we need to set a standard that can be easily monitored. A zero inflation policy, expressed as a price level target, would provide such a standard.

FIGURE 1



Source: Data Resources Inc.

FIGURE 2



Footnotes

1. See Pierre Fortin, "Do We Measure Inflation Correctly?" in Lipsey (1990).

2. Fisher (1934) describes proposals made by John Rooke in 1824, G. Paulett Scrope in 1833, G.R. Porter in 1843, W. Stanley Jevons in 1876, Robert Giffen in 1879, J. Barr Robertson in 1877, Simon Newcomb in 1879, Carlton H. Mills in 1879, Leon Walras in 1885, Alexander Del Mar in 1885, Alfred Marshall in 1887, F.Y. Edgeworth in 1889, Theodor Lawes in 1890, Silvio Gesell in 1891, Aneurin Williams in 1892, Robert Zuckerkandl in 1893, O.J. Frost in 1893, Arthur I. Fonda in 1895, Henry Winn in 1895, Arthur Kitson in 1895, George H. Shibley in 1896, J. Allen Smith in 1896, William A. Whittick in 1896, Dana J. Tinnes in 1896, Ektweed Pomeroy in 1897, Alfred Russel Wallace in 1898, Knut Wicksell in 1898, and Worthy B. Stern in 1898.

3. See Jonung (1979) and Fisher (1934) for descriptions of this monetary experiment.

4. See Gavin and Sniderman (1988) for a discussion of recent developments in macroeconomics.

5. See Peter Howitt, "Zero Inflation as a Long-term Target for Monetary Policy," in Lipsey (1990).

6. See Douglas D. Purvis, "The Bank of Canada and the Pursuit of Price Stability," in Lipsey (1990).

7. In the United States, Congress is currently debating House Joint Resolution 409, which would make price stability the overriding goal of monetary policy. In West Germany, the Bundesbank operates under a legislated mandate to pursue price stability as the primary goal of monetary policy. See Willms (1983), page 36.

8. The Riksbank chose to abandon its zero inflation policy in early 1937 so that it could fix its currency on an inflating British pound. Inflation then accelerated rapidly with the start of World War II.

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