A Response to Criticisms of Price Stability



Jim Saxton (R-NJ), Chairman

Joint Economic Committee United States Congress

September 1997

Executive Summary

A number of criticisms have been directed at the strategy of mandating price stability as the primary goal for monetary policy. These criticisms have been addressed in this paper and shown not to withstand scrutiny. Price stability remains a viable policy goal. In particular:

- Price stabilizing monetary policy not only retains a good deal of flexibility so that other policy goals are achievable, but this policy itself works to stabilize economic activity.
- Inflation is not necessary to foster labor market adjustment and may work to remove existing wage flexibility. Price stability, on the other hand, likely would work to promote such flexibility.
- An environment of price stability and low interest rates does not constrain monetary policy; central banks can pursue stimulative policy via a variety of channels under stable prices. Price stability, however, does minimize the need for such stimulative policy.
- The CPI remains a viable price index measure suitable for use as an inflation target. Despite some measurement bias, the CPI has many advantages which outweigh its disadvantages.
- The best research suggests that the benefits of price stability far outweigh its costs; price stability is well worth its price. This research indicates that inflation's costs are high, even at low levels of inflation.

Joint Economic Committee G-01 Dirksen Building Washington, DC 20510 Phone: 202-224-5171 Fax: 202-224-0240

Internet Address:

http://www.house.gov/jec/

A RESPONSE TO CRITICISMS OF PRICE STABILITY

INTRODUCTION

Central banks in several industrialized countries have made price stability the primary goal of monetary policy in recent years. Similar proposals have been made for the U.S. Federal Reserve. A number of criticisms have been directed at this strategy.

With deficit-manipulating fiscal policy no longer viewed as an appropriate tool for macroeconomic stabilization policy, some critics argue that a price stability mandate for monetary policy removes the only remaining governmental economic policy tool capable of stabilizing the macroeconomy over the business cycle.

Other critics posit that price stability is an inappropriate policy goal, contending that some positive inflation improves the workings of the economy by providing "the grease" for labor market adjustment and by ensuring that monetary policy remains viable and potent while minimizing deflation risk. Some cost-benefit (welfare) analysts contend that the costs of pursuing price stability outweigh its benefits. Still other critics focus on the measurement problems of defining price stability and using existing biased price indices such as the Consumer Price Index (CPI) as an inflation gauge.

This paper addresses key criticisms of price stability as monetary policy's primary goal. Each criticism is addressed and, for reasons that will be delineated, found to be without merit.

THE CRITICISMS

CRITICISM #1: Mandating price stability as the primary goal of monetary policy removes the only remaining policy tool capable of stabilizing the macroeconomy over the business cycle. With fiscal policy in a "balanced budget mode" and therefore deficit-manipulating fiscal policy no longer capable of serving a stabilization role, monetary policy must retain flexibility essential to assume stabilization responsibilities. Without such flexibility, nothing remains to stabilize a macroeconomy vulnerable to various shocks.

This criticism overlooks the workings of fiscal stabilizers as well as important stabilizing properties of both price stability and the manner in which price stability should be (and has been) implemented. Price stability itself works to stabilize the economy in several important

¹These countries include Australia, Canada, Finland, New Zealand, Spain, Sweden, and The United Kingdom.

ways: it lowers interest rates and, because lower inflation is associated with lessened volatility of inflation, it also lowers interest rates' risk and uncertainty premiums, thereby stabilizing both financial markets and interest rate sensitive sectors of the economy.² Businesspeople and investors no longer base their decisions on expectations of future inflation. Moreover, price stability fosters more efficient operation of the price system and effectively acts like a tax cut.³ As Federal Reserve officials themselves have emphasized repeatedly, price stability lays the groundwork for maximum sustainable long-term economic growth.

In responding to demand-side "shocks" or disturbances such as sudden spending slow-downs, price stabilizing monetary policy and counter cyclical policy are one and the same; such recessionary forces would put downward pressure on prices, but monetary policy under a price stability goal would be exerted in the opposite direction to stabilize the economy. Thus, inflation targeting would automatically work to minimize or offset demand-side disturbances to the macroeconomy, thereby removing or minimizing one key source of business cycle disturbance. Indeed, if the Federal Reserve successfully stabilizes prices, recession is less likely since most economic downturns occur in response to monetary policy actions to stem excessive buildups of inflation.

Furthermore, inflation targeting provides enough flexibility to manage even supply-side disturbances. International experience demonstrates, for example, that inflation targets are normally bands or ranges, allowing a good deal of flexibility in responding to such disturbances. Adjustments to price indices for volatile (often supply-side) price components such as food and energy are common. Furthermore, escape clauses for special situations have also been used, and multi-year targets emphasizing the long-term nature of price stability are typical. All of these factors allow for policy reactions that promote a gradual transition back to price stability, minimizing the disruption of supply-side shocks while at the same time allowing leeway for near-term counter cyclical policy. Additionally, inflation targeting as opposed to price level targeting implies that inflationary supply-side disturbances need not be offset by episodes of deflation: i.e., inflation targeting allows for a more flexible, gradual, and non-disruptive return to stability.

In short, adopting price stability as the primary goal of monetary policy allows for a significant degree of flexibility so that in practice, it does not preclude achieving other desirable goals. A "gradualist" pursuit of price stability typically does not conflict with stabilization goals. And demand-side as well as supply-side disturbances can be readily managed. Operationally, central banks pursuing price stability have not completely abandoned stabilization goals; they have adopted "gradualist" approaches and cushioned transitions to price stability.

²See Robert E. Keleher, *The Roots of the Current Expansion*, a Joint Economic Committee report, April 1997, for an explanation of how anti-inflationary monetary policy has contributed to the current expansion.

³Price stability removes distortions to the price system and eliminates those interactions of inflation and the tax code that lead to higher taxation on capital. Price stability implies tax rates are effectively lowered on items such as capital gains and/or depreciation allowances.

Empirical evidence supports these assertions. The recent U.S. disinflation experience, for example, has been associated with lower interest rates, stable financial markets, significant contributions from interest-rate sensitive sectors, and a remarkably sustained recovery. Similarly, at least one study has demonstrated that those countries recently adopting inflation targets have not only significantly lowered their inflation rates but have outperformed other (non-inflation targeting) countries in several other respects as well.⁴ Furthermore, because of Sweden's price stability regime, it outperformed most other countries in the turbulent 1930s.⁵ Additionally, some evidence suggests that lower inflation is associated with higher economic growth.⁶ Criticism suggesting the stabilization function vanishes under inflation targeting regimes, therefore, has little basis in either theory or fact and thus cannot be used as an argument to discredit the goal of price stability.

CRITICISM #2: A strict price stability target for monetary policy is suboptimal since it renders labor market adjustments inoperative in the face of unemployment disturbances and inflexible wages. With downward rigid nominal wages, some positive inflation is essential to foster labor market (real wage) adjustment to unemployment disturbances. Price stability, on the other hand, lowers real wage flexibility and the allocative efficiency of the labor market. Accordingly, the cost of eliminating inflation is higher than many believe since at low levels of inflation a permanent tradeoff between unemployment and inflation emerges; the unemployment costs of eliminating inflation increase as inflation approaches zero.⁷

This criticism misses the mark for a number of important reasons. It recycles repudiated Keynesian arguments regarding macroeconomic policy and the labor market. According to this view, price stability will result in increased (persistent) unemployment. This rise in unemployment, in effect, results from insufficient aggregate demand and, accordingly, its remedy is to pursue expansionary policies that produce more (albeit moderate) inflation. This

⁴See, for example, Bennett T. McCallum, "Inflation Targeting in Canada, New Zealand, Sweden, The United Kingdom, and in General," National Bureau of Economic Research, Working Paper No. 5579, May 1996, p. 9.

⁵See Robert Keleher, "The Swedish Market Price Approach to Monetary Policy of the 1930s," *Contemporary Policy Issues*, Volume IX, No. 2, April 1991.

⁶See, for example, Robert J. Barro, "Inflation and Economic Growth," National Bureau of Economic Research, Working Paper No. 5326, October 1995; Ruth Judson and Athansasios Orphanides, "Inflation, Volatility, and Growth," Board of Governors of the Federal Reserve System, May 1996; and Brian Motley, "Growth and Inflation: A Cross-Country Study," Federal Reserve Bank of San Francisco, Working Paper 94-08.

⁷In other words, the Phillips Curve is non-linear and not vertical at low levels of inflation.

⁸The writings of John Maynard Keynes in the 1930s reflected the special circumstances characterizing The United Kingdom but not the United States. Specifically, British labor markets in the 1920s and 1930s exhibited not only high unemployment but a substantial degree of rigidity reflecting powerful, entrenched labor unions, unemployment insurance, minimum wage laws, and welfare schemes that had minimal influence in more flexible U.S. labor markets in the 1920s and early 1930s.

higher inflation works to permanently lower unemployment. As the arguments below show, increasing inflation to reduce unemployment is inappropriate for a number of reasons.

This criticism rests on the presumption that nominal wages are (downwardly) rigid when both inflation and expectations of future inflation are eliminated. But empirical evidence that nominal wages are rigid even during periods of moderate inflation is not conclusive. Some researchers, for example, find little evidence of such wage rigidity. Furthermore, there is anecdotal evidence that wage flexibility may have increased as union membership has declined (as a percentage of the labor force) and as higher percentages of workers are employed in smaller firms whose wage arrangements are more likely to resemble "auction" rather than "contract" formats.

Empirical evidence mustered to support the view that wages are rigid under price stability is based largely on historical data from periods of moderate inflation. While some evidence supporting some wage rigidity may exist during periods of moderate inflation, there is little if any evidence that nominal wages would be downwardly rigid under price stability. Indeed, there is reason to believe that wages likely would become more flexible after a period of stable prices since such a regime would generate a different set of expectations and hence foster different behavior on the part of both suppliers and demanders of labor services. Historical episodes of relatively stable prices in the early 1900s, especially the 1920s, much of the 1950s, and even the mid-1990s indicate that during these periods unemployment rates were low, not high, as predicted by this view. In short, workers' resistance to wage cuts depends on the monetary regime; nominal wage rigidity is not necessarily a permanent characteristic of the labor market.

Of course, some wage rigidity may be related to longstanding labor market institutions (e.g., minimum wage laws, unemployment insurance, union strength, etc.) that adjust only very slowly to changes in both money regime and price expectations. Accordingly, such institutional rigidity cannot readily be affected by changes in a monetary policy or policy regime. And changing these institutions is not the function of monetary policy; the monetary authority can only

⁹Moreover, the methodology used to assess such rigidity is dubious. Specifically, observations of the frequency of downward wage adjustments (during moderate inflation) are used to draw inferences about wage "rigidity." With positive productivity growth, it is not obvious why negative wage movements would be expected under price stability. Furthermore, economic definitions of wage "rigidity" pertain to the responsiveness of nominal wages to changes in unemployment rather than to simply the frequency of negative (nominal) wage adjustments.

¹⁰See, for example, A. Crawford, and C. Dupasquier, "Can Inflation Serve as a Lubricant for Market Equilibrium," in <u>Economic Behavior and Policy Choice Under Price Stability</u>. Ottawa, Bank of Canada, 1994, pp. 49-80; David E. Lebou, David J. Stockton, and William L. Wascher, "Inflation, Nominal Wage Rigidity, and the Efficiency of Labor Markets," Finance and Economics Discussion Series, Board of Governors of the Federal Reserve System, 94-95, October 1995; and Kenneth J. McLaughlin, "Rigid Wages?," <u>Journal of Monetary Economics</u>, 34 (1994), pp. 383-414.

¹¹See, for example, Robert J. Gordon, "Comments and Discussion," <u>Brookings Papers on Economic Activity</u>, 1, 1996, p. 62.

establish a regime that influences expectations of future inflation. The problem of gradual labor market adjustment in this case, therefore, is institutional wage rigidity, not price-stabilizing monetary policy. It would be a serious monetary policy mistake to adopt, in effect, inflationary policies to accommodate these institutions.

The strategy of adopting inflationary policies "to lubricate" the labor market depends on "money illusion" and would fail to lower real wages, to facilitate labor market adjustment, to make the labor market more flexible, or to lower unemployment. ¹² Instead, this policy would have the unintended effect of making nominal wages increasingly downwardly rigid and upwardly flexible. ¹³ Thus, such policy does not predictably lower real wages or the unemployment rate. Indeed, even moderate inflation cannot produce sustained benefits and often leads to both higher unemployment and higher inflation. Furthermore, higher inflation would increase the noise in relative wage changes, thereby reducing the efficiency of the wage setting process. ¹⁴ Additionally, this criticism ignores the employment promoting effects of price stability as described, for example, in Keleher (1997). ¹⁵

Fortunately, with theoretical advances in recent years, this view is now a minority position. ¹⁶ Such criticism of price stability rests on neither solid theoretical nor empirical ground. Wage rigidities—to the extent they do exist—cannot be mitigated by altering monetary policy. Promoting more inflation to lubricate the labor market would only work to lessen existing wage flexibility. And contrary to this criticism, price stability and stabilizing price expectations would work to promote rather than to inhibit such flexibility.

CRITICISM #3: Positive inflation is essential to allow monetary policy to pursue expansionary policy in a low interest rate environment. With positive inflation rates, central banks can respond to negative aggregate demand shocks by driving nominal short-term rates below expected inflation, thus making the real Fed funds rate negative and boosting the economy. Under price stability (or zero inflation), on the other hand, the zero interest rate floor on nominal interest rates translates into an equivalent non-negative floor for real short-

¹²"Money illusion" refers to the argument that workers will **not** accept a reduction in their real wage brought about by lowering nominal wages but will accept an identical real wage reduction implemented by increasing the price level.

¹³This would occur because persistent inflation would work to strengthen the above-mentioned institutional rigidities (causing nominal wages to become more downwardly rigid). At the same time, strengthened expectations of future inflation would bring about more frequent recontracting of nominal wages resulting in increased flexibility in the upward direction.

¹⁴See Ben Bernanke and Frederic Mishkin, "Inflation Targeting: A New Framework for Monetary Policy?," National Bureau of Economic Research, Working Paper No. 5893, January 1997, p. 29 (footnote 12).

¹⁵Robert E. Keleher, *The Roots of the Current Expansion*, a Joint Economic Committee study, April 1997.

¹⁶See Carl Walsh, "Nobel Views on Inflation and Unemployment," <u>Economic Letter</u>, Federal Reserve Bank of San Francisco, 97-01, January 10, 1997, p. 2.

term rates, limiting the central bank's ability to reduce real short-term rates and stimulate the economy. Yet historically, negative real (short-term) interest rates have been essential ingredients in facilitating economic recoveries and bolstering the financial system in situations of financial crisis or strain. Thus, zero inflation importantly constrains monetary policy by removing this degree of freedom and removing the central bank's ability to pursue expansionary policies in these circumstances. Price stability, therefore, poses important risks. Positive inflation allows for broader monetary policy options and is needed "to lubricate the wheels of monetary policy."

This criticism reflects remarkable confusion as to the working of monetary policy. It suggests monetary policy may be unable to lower short-term interest rates and therefore unable to stimulate the economy under conditions of price stability or deflation. Yet, clearly, the monetary authority can use open market operations to purchase a wide spectrum of financial assets in pursuing expansionary policy; monetary policy need not work exclusively through short-term rates. Most notably, long-dated securities or foreign exchange, for example, easily could be purchased and used as transmission vehicles for expansionary monetary policy. But even if the monetary authority wanted to remain in short-dated securities, it could continue to purchase such securities in the open market, thereby creating reserves until broad money and credit aggregates expanded and forward-looking market prices (such as commodity prices and foreign exchange rates) suggested a depreciation in the value of domestic currency. Monetary policy, therefore, can be expansionary despite low short-term interest rates. Furthermore, the discount window remains available for use in these circumstances. In short, monetary policy can be highly potent through a wide variety of channels in stimulating a weak economy even if interest rates are low.

Empirical evidence clearly indicates that expansionary monetary policy has in fact occurred under noninflationary conditions (for example, in the United States, Britain, and Sweden during the 1930s¹⁸). In sum, there is no theoretical foundation for and little, if any, empirical evidence supporting the argument that monetary policy cannot be expansionary in low interest rate environments.

This criticism is more an indictment of the effectiveness of real interest rates as guides or indicators for monetary policy than a challenge to the potency of monetary policy in a low rate environment. To repeat a well-known lesson of monetary theory: it is often misleading to equate a particular level of interest rates with the stance of monetary policy. Criticism of price

¹⁷Such action would push up bond prices and depreciate the foreign exchange rate.

¹⁸See, for example, Milton Friedman and Anna Schwartz, *A Monetary History of the United States 1867-1960*, 1963, Princeton: Princeton University Press; Frederic Mishkin, "General Discussion: Overview Panel," <u>Achieving Price Stability</u>, Federal Reserve Bank of Kansas City, 1996, pp. 339-340; Frederic Mishkin, "The Channels of Monetary Transmission: Lessons for Monetary Policy," Federal Reserve Bank of New York, February 1996, p. 22; and Christina Romer, "What Ended the Great Depression?," <u>Journal of Economic History</u>, December 1992, 52, No. 4, pp. 757-784.

stability as limiting the ability of policy to stimulate the economy by lowering short-term interest rates is an example of this common error. Indeed, real interest rates are particularly unreliable guides to monetary policy for a number of reasons. ¹⁹ Rather than interest rates, jointly assessed market price indicators (such as commodity prices or foreign exchange rates) as well as broad measures of the money supply are normally reliable monetary policy indicators in noninflationary circumstances.

Finally, the criticism fails to recognize that a credible policy of price stability implies the absence of deflation and deflationary expectations. Such a policy lessens the chances of both negative demand shocks and financial strains of the type requiring stimulative policies suggested in the criticism. In short, potential problems requiring stimulative monetary policy are less likely to occur with a credible price stability policy.

In sum, the presence of low interest rates and the absence of inflation do not constrain monetary policy; stimulative policy can still occur via a wide variety of channels in these circumstances. Price stability, however, does minimize the need for such stimulative policy and this environment highlights the limitations of real interest rates as policy guides.

CRITICISM #4: Once inflation is underway, it is better to tolerate moderate inflation than to bear the significant costs of reducing it to zero. Welfare analysis suggests that reducing inflation to zero is inappropriate since at modest/moderate levels of inflation, the discounted costs of reducing inflation outweigh the accompanying discounted benefits. In short, the cost of going from moderate inflation to zero inflation does not warrant the benefits of price stability.²⁰

Evaluating such arguments is difficult because proper assessments necessarily entail both <u>comprehensive</u> and <u>accurate</u> measures of the discounted (private and public) costs and benefits of reducing inflation over extended periods of time. The availability of such figures is exceptionally difficult given the current state of knowledge.

For example, whether particular measures of the cost of inflation are <u>comprehensive</u> is difficult to know. Earlier attempts to measure these costs were based on partial equilibrium

¹⁹Real interest rates can be inappropriate guides to monetary policy not only because they are unobservable, depending on accurate measures of inflationary expectations, but also because their equilibrium values constantly change with alterations in returns to (and productivity of) capital.

²⁰One popular version of this argument is sometimes referred to as Howitt's Rule, which states that the policy of disinflation should be continued until an inflation rate is reached such that the present value of the costs of further disinflation equal the present value of the gains from additional disinflation. See Daniel L. Thornton, "The Costs and Benefits of Price Stability: An Assessment of Howitt's Rule," Federal Reserve Bank of St. Louis Review, March/April 1996, p. 33.

models with inflation interpreted as a tax on real money balances.²¹ These estimates of the cost of inflation were quite low but later refined general equilibrium estimates of these costs of the inflation tax were higher.²² More recently, research has focused on the interaction of inflation and the tax code. These later calculations are more comprehensive and find significantly higher costs of maintaining existing inflation than those interpreting inflation as a tax on money balances.²³ These more recent results suggest that since the costs of inflation are so high, inflation should be reduced.

Yet most analysts concede that even these most recent calculations are incomplete, omitting, for example, quantification of both inflation's uncertainty costs and the cost of inflation's distortion of the price system.²⁴ Thus, even these more comprehensive cost estimates most likely are understated.

In addition, the accuracy of these (discounted) costs and benefits of inflation is exceedingly difficult (if not impossible) to establish. Reasons include the following:

- Estimates depend on factors difficult to measure: The costs of reducing inflation depend significantly on factors notoriously difficult to quantify, such as price expectations, the credibility of policy makers, and the stickiness of prices and wages. Furthermore, there is no way to know how these factors may change in the future.
- Estimates depend on arbitrary assumptions: The measured costs and benefits of inflation are often conjectural, depending heavily on unavoidable assumptions. For example, the results depend on 1) what discount rate is assumed, 2) whether inflation is presumed to influence the level or growth rate of output, 3) which tax structure is assumed, or 4) whether various costs or benefits of inflation are presumed to be transitory (one-time events) or permanent in nature.²⁵ If these key assumptions are changed, the conclusions can change dramatically.

²¹See, for example, M.J. Bailey, "The Welfare Cost of Inflationary Finance," <u>Journal of Political Economy</u>, p. 64, April 1956: pp. 93-110; M. Friedman, "The Optimum Quarterly of Money," in <u>The Optimum Quantity of Money and Other Essays</u>, 1969, University of Chicago Press, Chicago, pp. 1-50.

²²See, for example, Richard Black, Donald Coletti, and Sophie Monnier, "On the Costs and Benefits of Price Stability," Bank of Canada Conference on Price Stability, Inflation Targets, and Monetary Policy, May 1997, p. 27. These estimates are sensitive to the specification of money demand and the definition of money (see p. 27).

²³See Black, Coletti, and Monnier, op.cit., p. 28.

²⁴See, for example, Black, Coletti, and Monnier, <u>op. cit.</u>, p. 26; Robert E. Lucas, "On the Welfare Costs of Inflation," <u>Center For Market Policy Research</u>, Stanford University, February 1994, p. 22; and Gregory Hess and Charles Morris, "The Long-Run Costs of Moderate Inflation," <u>Economic Review</u>, Federal Reserve Bank of Kansas City, Second Quarter 1996 (Volume 81, No. 2), p. 84.

²⁵See, for example, Thornton, op. cit., pp. 33-34.

• The power or robustness of the estimates is low at modest levels of inflation: The application of welfare theory to crude, imperfect real-world data is problematic. The power or robustness of relevant empirical estimates is low; these estimates are sensitive and can change dramatically with alternative specifications and/or methodology. This is especially the case when such estimates are made for environments of low levels of inflation where relatively few data points or observations exist.

As a consequence of this lack of precision, numerical estimates of the discounted costs and benefits of moving from low levels of inflation to zero inflation must be regarded with a good deal of caution and reservation.

Nonetheless, despite these many significant problems, the most recent, most comprehensive, and likely most accurate estimates indicate that the costs of even "low" or "a little" inflation are significantly larger than suggested by critics of price stability.²⁶ This research suggests that those critics advocating continued inflation have substantially underestimated its costs, and that the perverse effect of inflation on output is significantly larger at lower rates of inflation than previously believed. These estimates indicate that large net gains would accrue by moving to price stability; the benefits of price stability significantly outweigh its costs.

Prominent examples of such research include Lucas (1994) and Feldstein (1996).²⁷ Lucas' estimates of the U.S. welfare cost of inflation attaches much higher costs to low rates of inflation than previous estimates. Feldstein argues that the benefit of moving to price stability from low levels of inflation substantially exceeds its costs; he maintains that very large net gains would be made by moving to zero inflation. Focusing on the interaction of inflation and the tax structure, Feldstein contends that these interaction effects cause substantial welfare losses even at low levels of inflation. He argues that the effects of the interaction of inflation and capital taxation are much larger than distortions to money demand and the resulting seignorage.²⁸ More recent studies by a number of other researchers substantiate these results for both the United States and other countries.²⁹

²⁶Comparisons of the results of these studies are difficult to make because of the many differences cited above. A thorough review of the literature is found in Black, Coletti, and Monnier, op. cit.

²⁷Robert E. Lucas, Jr., "On the Welfare Cost of Inflation," Center for Economic Policy Research, Stanford University, February 1994; Martin Feldstein, "The Costs and Benefits of Going from Low Inflation to Price Stability," National Bureau of Economic Research, Working Paper No. 5469, February 1996.

²⁸Feldstein, op. cit., pp. 51-52.

²⁹See contributions summarized in "The Costs and Benefits of Achieving Price Stability," <u>NBER Reporter</u>, Spring 1997, pp. 29-30, to be published by the University of Chicago Press in National Bureau of Economic Research conference volume. See also Andrew B. Abel, "Comment," in <u>Reducing Inflation: Motivation and Strategy</u>, edited by Christina D. Romer and David H. Romer, University of Chicago Press, Chicago, 1997.

In conclusion, this welfare cost criticism of price stability, therefore, does not withstand close scrutiny, depending only on arbitrary assumptions and selective methodology. To be sure, there are formidable problems of calculating comprehensive and accurate measures of the net benefits of moving to zero inflation from low levels of inflation. Nonetheless, the best recent research suggests that the benefits of moving to zero inflation substantially outweigh the costs of doing so; price stability is well worth its cost.

CRITICISM #5: The true rate of price inflation cannot be measured accurately with broad price indices such as the Consumer Price Index. There are well-documented measurement biases of the CPI involving overestimates of inflation: i.e., the true rate of inflation is below the measured rate. These biases imply that the CPI (and other broad inflation measures) cannot be employed as useful policy goals. As a consequence, price stability or inflation targeting is unworkable as a strategy for monetary policy and cannot, in practice, be implemented.

While mismeasurement bias certainly exists and should be considered, the problem is not a major one and is certainly easily manageable. Estimates of the CPI inflation bias do vary, but most fall within a range of about 0.5 percent to as much as 2.0 percent per year. Any price stability or inflation target adopted, therefore, could easily include an adjustment equal to the estimated measurement bias. And since such targets normally take the form of bands, uncertainties associated with these estimates could be reflected in the band width. Furthermore, some of the CPI measurement bias is already being remedied by the Bureau of Labor Statistics and plans for correcting other problems are already underway. An adjusted CPI inflation target, therefore, could readily serve as a viable inflation policy goal.

But the inflation targeting strategy is not necessarily wedded to the CPI or any single measure of price change. Should the CPI not be chosen, other indices are readily available and accessible.

The rich international experience of inflation targeting provides many lessons in this regard. Despite recognized measurement bias in their respective CPI inflation measures (or equivalents), the several countries that have adopted explicit inflation targets all have successfully used the CPI (or equivalent) measure as the basis for their inflation targeting and anti-inflation programs. Measurement bias is viewed as a relatively minor problem outweighed by the CPI's many practical advantages: namely, its familiarity, ready availability, minor revisions, and convenience in communicating with the public. Notably, most countries using CPI inflation

³⁰Alternative price indices have problems of their own, so no practical alternative exists. See, for example, Charles Steindel, "Are There Good Alternatives to the CPI?," <u>Current Issues</u>, Federal Reserve Bank of New York, Volume 3, Number 6, April 1997.

³¹See Bureau of Labor Statistics, U.S. Department of Labor, "Measurement Issues in the Consumer Price Index," June 1997.

targets adjust the index for volatile components and non-monetary influences. Despite imperfections, therefore, CPI targets are viewed as quite practical and useful; the CPI is certainly a viable price or inflation target.

SUMMARY AND CONCLUSIONS

A number of criticisms have been directed at the strategy of mandating price stability goals for monetary policy. These criticisms have been addressed in this paper and shown not to withstand scrutiny. Price stability remains a viable policy goal. In particular:

- Price stabilizing monetary policy not only retains a good deal of flexibility so that other policy goals are achievable, but this policy itself works to stabilize economic activity.
- Inflation is not necessary to foster labor market adjustment and may work to remove existing wage flexibility, unlike price stability.
- An environment of price stability and low interest rates does not constrain monetary policy; central banks can pursue stimulative policy via a variety of channels under stable prices. Price stability, however, does minimize the need for such stimulative policy and highlights the limitations of real interest rates as effective monetary policy guides.
- The CPI remains a viable price index measure suitable for use as an inflation target.
 Despite some measurement bias, the CPI has many advantages which outweigh its disadvantages.
- The best recent research suggests that the benefits of price stability far outweigh its costs; price stability is well worth its price. This research indicates that inflation's costs are high, even at low levels of inflation.

Dr. Robert E. Keleher Chief Macroeconomist Joint Economic Committee