
Inflation: The Problems and Prospects before Us

Like the weather, inflation is a lot easier to talk about than to do something about. My former colleague Henry Fowler and I can testify to that from personal experience. I welcome the comfortable position here on the sidelines. I wish I had better answers to the big questions about inflation. But as a private citizen I enjoy kicking them around even when I can't answer them. And perhaps I can contribute to your education by showing why easy answers are likely to be wrong answers.

What Is Inflation?

At the primer level, inflation may be defined as a condition of generally rising prices. For the United States, we rely on two general price indices as our basic measuring rods—the Consumer Price Index and the over-all deflator of gross national product (GNP). The former keeps tabs on the prices paid by a typical urban wage-earning family for its market basket of goods and services. The GNP deflator covers all newly produced goods and services—investment goods and items bought by government as well as consumption—but it excludes items which are not newly produced such as used cars and land. If inflation referred to all periods in which these yardsticks registered increases, we would conclude that inflation has been virtually constant for the past 36 years. The only years since 1933 in which both indices declined were 1938, 1939, and 1949.¹

Clearly, that is not what we mean by inflation either in everyday parlance or in technical discussions. Rather, in our general usage, inflation is a condition of *significantly* or *substantially* rising prices. Since World War II, both measuring rods have risen less than 1.75 per cent in the following 11 years: 1949, 1950, 1953 to 1955, and 1959 through 1964.

Those are noninflationary years by general acclaim. On the other hand, both indices rose at least 2.75 per cent in 9 postwar years: 1946 through 1948, 1951, 1957, and 1966 through 1969. Everybody would call these inflationary; by American standards any rate close to 3 per cent a year is inflation. A few years fall into an intermediate category with price increases between 1.75 and 2.75 per cent, at least by one of the yardsticks: 1952, 1956, 1958, and 1965.²

The agreement on the semantics of inflation is understandable. The acceptance of rates of price increase up to 1.75 per cent is, in part, a compromise with realism. For the postwar period, even a very weak economy has meant a slow advance of prices at a rate of more than 1 per cent. Moreover, the tolerance is heightened by new products and new features of old products that give us more for our money even though they are not registered as declines in our price indices. You and I would not want to shop in the drug store of a decade ago—we wouldn't find our current brand of razor blades or shaving cream, or the hair spray our wives use, nor could we fill many of the prescriptions that our doctors write. Nobody knows how to quantify the amount of "bias" resulting from the omission of such elements from our price indices. But it could be as much as 1.5 per cent a year.

When prices are moving up at a 1.5 per cent annual rate, the consumer has little cause to regret that he didn't do his shopping last year. Nor will any firm hold excess inventories or accelerate scheduled investment outlays in order to beat general price increases of this magnitude. Obviously, stockpiling of particular commodities may occur, based on expected major changes in individual prices—but in a noninflationary period, commodities as a group will normally creep up even less than general price indices. In the early sixties, for example, nearly the entire increase in the general price level was attributable to services and to distribution, both areas of slow productivity gains. For industrial commodities at wholesale, prices were virtually horizontal.

If a 1.5 per cent rate of advance in prices is tolerable, then what makes 3 per cent qualitatively different? Perhaps again history conditions our normative standards; 3 per cent looks excessive because we have in fact achieved lower rates for most years. More important, 3 per cent is a big number relative to gains in productivity and to "normal" levels of nominal interest rates—at least to the levels we used to consider normal. When wage increases parallel the average economy-wide gain in productivity,

a 3 per cent price rise is big enough to wipe out any gain in real income. When savings accounts and Government bonds yield 4 per cent, a 3 per cent price increase cancels most of the real return from saving. In this situation, price increases are big enough to worry about, to hedge against, and to speculate on. They become a factor in business decision making and a source of uncertainty to borrowers and lenders. Approximately the same rate of price increase that triggers price-oriented behavior by the financial and business executive also evokes the anguished cry of the housewife.

Thus inflation is a situation in which prices rise rapidly enough to become an important influence on economic welfare and decision making. Please don't press me on exactly where to draw the boundary line in the no man's land between 1.75 and 2.75 per cent.

Causes and Cures

The anonymous author who first expressed the cause of inflation as too much money chasing too few goods still holds the prize for the best simple-minded truth on this subject. When the dollar value of what the nation is trying to spend exceeds the value of our capacity output, prices are bid up. Excess demands strain our resources, normally both labor and plant capacity. The relative degree of pinch on these two main types of resources varies; in our recent inflation, labor has clearly been the bottleneck factor.

The main cause of the excessive spending may vary among inflationary periods; it can reflect a spurt in private demand or an overly expansionary fiscal-monetary policy. The inflation of the late forties was caused by the enormous buoyancy of private demand, which in turn stemmed from the shortages of goods and the build-up of liquidity that took place during the war. The last vestiges of these pent-up demands also contributed to the 1956-57 pressures on prices. On the other hand, the Korean inflation and the Vietnam inflation both resulted from mighty swings to stimulus in the Federal budget.

In a sense, of course, stabilization policy can be blamed for any inflation. Whatever the pressures, fiscal-monetary policies can head off inflation if they do their job perfectly. But that standard of perfection simply cannot be achieved in practice. Indeed, one particular stabilization tool—such as monetary policy—can get all the blame all the time for not holding the lid down on aggregate demand. But it takes a strained

view of the world to attribute inflation to the failure to use the monetary brakes when private demand or the budget presses the accelerator to the floorboard. Surely, in any meaningful sense, the Federal budget was the engine of the inflation in the period from 1966 to 1968.

The basic cure for inflation is to remove or offset its cause: Cut aggregate demand by fiscal and/or monetary policy sufficiently so that money spending will no longer exceed the value of goods. History tells us that, once inflation has a firm foothold, no reduction in aggregate spending will stop prices dead in their tracks. Today's price rises reflect yesterday's increases in wages and material costs; and today's wage advances reflect yesterday's increases in the cost of living. Thus, a rise in prices develops momentum; even after the accelerator is released and a shift to the brakes is accomplished, prices continue to coast uphill for a while. Even during the severe recession of 1957–58, the momentum of cost pressures continued to push the price level upward at an inflationary rate for some time.

Apart from the lag, however, inflation is easy to cure. Every economist knows a sure and completely reliable remedy. If fiscal-monetary policy is set so tight as to create a recession, we can be assured of price stability. When markets are exceedingly weak, no businessman will dare raise his prices for fear of losing his markets, and no workers—organized or unorganized—will demand significant wage increases for fear of losing their jobs. The problem of curing inflation is difficult and challenging only because the nation will not take this decapitation cure for the headache of rising prices. We are concerned about employment, production, consumer living standards, and business investment for economic growth. It is the conflict of these objectives with the objective of price stability that gives the economist an opportunity to write papers.

It also gives the economist the obligation of telling the nation a most unhappy fact of life: If the American public insists on a better price performance than it got in 1969, it must accept some extra unemployment and some sacrifice of output and real income. Unfortunately, we must say: "Yes, Virginia, there is a trade-off between employment and price stability." Just as we'd love to make omelets without breaking eggs, so we would love to correct our current price performance with no increase in unemployment. But no one in the world has a recipe for doing that. Everything we know about the performance of our economy suggests that the 3.3 per cent unemployment rate that prevailed early in 1969 was totally inconsistent with an improving price record.

Costs of a Slowdown

Curbing inflation involves important costs. Let me offer some *illustrative* arithmetic of what “gradual disinflation” might involve, underlining that my purpose here is not to make a forecast for 1970. Suppose that we experience slow growth of output and employment and an accompanying retreat in the unemployment rate from the 3.7 per cent of the third quarter of 1969 to 4.4 per cent in the spring of 1970. Suppose we then resume growth at a stronger—but not “boomy”—pace, and thus stay at that unemployment rate. Suppose further that this pattern of economic activity successfully produces a gradual deceleration in prices. What will we have paid for this slowdown in output and incomes?

In line with historical evidence that a 1 point increase in the unemployment rate means about a 3 per cent sacrifice of real GNP,³ a rise in the unemployment rate from 3.7 per cent to 4.4 per cent would cost us about \$20 billion in the annual rate of real GNP, measured in today's prices. Obviously, that also means a \$20 billion shortfall in real incomes. These costs are measured *relative* to performance along a growth path at a steady unemployment rate of 3.7 per cent; the figures do not imply that real GNP or aggregate real income would actually decline during the period. Corporate profits are particularly vulnerable incomes; while they amount to only about 10 per cent of our gross national product, they absorb about one-third of any shortfall. Thus, about \$7 billion of the \$20 billion cost in real income would come out of corporate profits (before tax). Owners of small businesses, farmers, and self-employed professionals would absorb a couple of billion dollars of the cost. Roughly \$10 billion of the toll would be paid by recipients of wages and salaries.

The assumed increase of unemployment would amount to nearly 600,000 people. In addition, because of the reduced tightness of the labor market, about 300,000 current members of the labor force would eventually stop participating; many women, teen-agers, and older men who lose jobs and do not readily find others stop hunting for work. In addition, a decline in overtime work and an increase in part-time work would take place. All in all, the cost would exceed 1,000,000 man-years of labor. As much as one-fifth of this loss of labor time might be experienced by black workers. To be sure, many of the workers, white and black, whose job opportunities were curtailed would not be the principal breadwinners of their families. Many would experience only an extra week or two of unemployment. Even at a 4.4 per cent rate, relatively few of the jobless would suffer very long unbroken stretches of unemployment.

But the real incomes of a great many additional families would be seriously affected by unemployment. I think it's fair to say that workers are seriously affected if they suffer 5 weeks or more of unemployment during a year; that means their annual real incomes are clipped by at least 10 per cent as a result of unemployment. The number of seriously affected workers would be expected to increase by $1\frac{1}{4}$ to $1\frac{1}{2}$ million if average unemployment rose 600,000.⁴ Some interesting, although highly hazardous, calculations made by Metcalf and Mooney⁵ also suggest that an increase in the unemployment rate of 0.7 per cent would push about 700,000 people below the line of poverty income. It is important to look at this side of the ledger squarely and to recognize the sacrifice associated with disinflation, no matter how gradual and how well executed it may be.

Costs of Inflation

Now let me turn to the other side of the ledger. What do we get by achieving price stability?

One obvious dividend comes in our balance-of-payments position. Even though we have been inflating only slightly more rapidly than our major trading partners, the U.S. surplus on trade account has suffered enormously from the rapid growth and accelerating prices of recent years. Our trade surplus was \$5 billion in 1965; it was under \$1 billion in 1968 and has begun to improve only in the past few months. The composition of U.S. trade is such that our price performance must be better than that of our trading partners if we are merely to hold our own. To be sure, the major deterioration in our trade position in recent years has not hurt the world role of the dollar. But that result has depended on a series of strokes of good luck—like the shift of the big surplus from gold-hungry de Gaulle to dollar-happy West Germany—and a series of ingenious U.S. policy actions—including unhappy stopgaps of controls and forward-looking innovations like SDR's.

Still, the balance of payments has only limited political appeal as a rationale for price stability in the United States. To be sure, in early 1968, after the devaluation of sterling, the threat of a world financial crisis was a handy argument for Secretary Fowler and the rest of us to invoke in pleading for a program of fiscal restraint that the country needed desperately for our own good. The specter of an international financial crisis really frightened Congress; even to people who didn't know what "the downfall of the dollar" meant, it sounded a lot more serious than a

few additional points on interest rates or price indices. But this episode was certainly the exception. In 1951 and 1956–57, the United States was fighting inflation because it was unacceptable at home, even though our inflation would have helped to restore world equilibrium and alleviate the dollar shortage. The gut issues about inflation are those of household finance, not world finance.

The costs on the home front are elusive. Because economists do not have good, solid ways to evaluate the costs, they are tempted either to get moralistic about price stability or else, at the other extreme, to dismiss the problem of inflation as an optical illusion. I don't have good answers either, but I pledge utmost effort neither to moralize nor to dismiss the problem. Instead, let me do some arithmetic on the domestic costs of our recent inflation, in terms of the distribution of real incomes and the impact on balance sheets. Prices in the third quarter of 1969 were about 7 per cent higher than they would have been had we followed a path of 2 per cent annual increases since mid-1965. Let us use that as a rough measure of our recent inflation. Meanwhile, total real incomes and output in the latest quarter may be guessed as roughly 1 to 2 per cent higher than if we had followed a noninflationary track.

Income Effects

It is remarkably difficult to determine who gained and who got hurt in terms of real income. The retired aged are the only major specific demographic group of Americans that I can confidently identify as income losers. Since 1964, benefits under the Federal Civil Service Retirement system have had a cost-of-living escalator providing full adjustment—but this is a rare exception. Only a very few private pension plans have any escalator provision, although benefits to retirees in some industries have been scaled up as the outcome of explicit collective bargaining agreements.

Social security retirement benefits were increased through new legislation by 13 per cent in 1968, and a further increase is slated for 1970. While these legislative actions have undoubtedly been influenced to a degree by the rate of increase of consumer prices, it is doubtful that the benefit increases and price movements have been closely correlated. The nation wished to share the current benefits of prosperity with the retired aged, and it probably would have provided nearly as large money gains (and hence larger real increases) if the price level had been more stable.

All in all, retired Americans must have lost at least 4 per cent of their real pension incomes as a result of the 7 per cent inflation. Greater job opportunities for the aged have cushioned the blow to a degree; for example, the fraction of men over 65 still working rose in 1967 and 1968 for the first time in more than a decade. But the extra labor income cannot be any more than 1 or 2 per cent of the total real incomes of the aged.

For those earning incomes from the productive process, an arithmetic identity assures that for every extra dollar that a buyer must pay as a result of price increases, an extra dollar's worth of income is generated for some seller. Thus, price increases *per se* cannot create an aggregate net gain or net loss of before-tax incomes for sellers of productive services.

For after-tax incomes, a slight qualification is in order. Price increases add more than proportionately to Federal income tax bills because of the graduated character of the tax. The income-elasticity of the Federal personal income tax is nearly 1.3—liabilities go up 1.3 per cent for each 1 per cent rise in money income. For a typical middle-income American household, Federal income taxes are about one-eighth of before-tax income. Thus, if the before-tax income of a family just keeps pace with prices, its after-tax income will lag a bit behind—it can be shown that the elasticity of after-tax income would amount to .96. An inflation totaling 7 per cent thus puts a small dent of one-fourth of 1 per cent in the real after-tax income of such a family.

Because it stepped up employment and tightened labor markets, inflationary excess demand clearly added to the aggregate real income of wage-and-salary earners. Their share of personal income expanded: total wages and salaries, net of social insurance contributions, rose 44 per cent from the second quarter of 1965 to the third quarter of 1969, while the remainder of personal income rose 40 per cent. Disposable (i.e., after-tax) personal income per capita in real terms—our best measure of the purchasing power of the average household—advanced by an unusually strong 15 per cent over the period, and real disposable wage-and-salary income per capita must have scored a slightly larger gain—perhaps 17 per cent.

The most important groups of beneficiaries were those who could gain from the availability of more jobs and steadier jobs. The shortfalls in annual incomes due to unemployment diminished. Many families got an extra paycheck from wives or teen-agers who went to work.

Substantial gains were also made by the many people who were

upgraded—for example, by shifting from farm to nonfarm employment or from lower paying jobs in services to higher paying jobs in manufacturing. The tightening of the labor market also tended to narrow percentage wage-differentials between unskilled and skilled workers. In general, the reduced unemployment, greater upgrading, and narrowed differentials all tended to be especially favorable to the working poor. Those who had formerly been at the back of the hiring line generally benefited as a result of inflationary excess demand.⁶

Many middle- and upper-level wage groups also fared particularly well. Building tradesmen were one group of skilled workers with outstanding gains. Many families, however, could not benefit from the new developments in the labor market. Men who had steady jobs in 1965 and are still holding those same jobs (and whose wives have not entered the labor force) have generally been squeezed. In particular, for the average factory worker, real spendable take-home pay stagnated on a plateau after 1965 in contrast to its steady rise during the early sixties.

In light of such dispersions, it is easy to understand the current militancy of veteran union members who have been at the same job for years. It is easy to understand the causes of discontent in many quarters. The large advances of the aggregates do not tell the whole story. Higher prices have raised money incomes in a haphazard, seemingly arbitrary way. Such a reshuffling of real incomes is, in the view of most Americans, unjust—and it does not even seem to create desirable incentives to shift production or to move resources.

Moreover, the effects of inflation in raising money incomes may be less visible than the higher prices. Everybody knows that higher prices in our supermarkets and department stores are the result of inflation. When money incomes go up, however, the cause is not so obvious. When the man of the house brings home an 8 per cent wage increase, he and his wife are confident that he earned and deserved that raise. If prices subsequently go up by 4 per cent, the family is not happy with the 4 per cent gain in real income; rather it feels cheated that the wage gain was cut in half by inflation. In point of fact, of course, the husband's 8 per cent wage increase may have occurred only because of inflation. Nonetheless, nearly everybody feels that inflation leaves him with the short end of the stick. It is thus divisive and disruptive; and these social consequences are in themselves important.

At the same time, one must be careful about interpreting the public's expression of concern about inflation. We all gripe about our financial

positions and our difficulties in stretching incomes to meet aspirations. When the income side of the balance is rising, complaints about difficulties of making ends meet get focused on the outgo side—on high prices. My barber was busily defending his latest price increase, noting all the higher prices he had to pay. In that list, he reported that his electric bill at home had doubled over the past year. When I commented that public utility rates hadn't increased, he replied: "You're right, but I installed central air conditioning."

Let me cite one interesting barometer of public attitudes. The University of Michigan's Survey Research Center asks people at the start of each year to evaluate their current financial situation compared to a year earlier. Recession years stick out like sore thumbs in the post-Korean record, with a peak of 31 per cent of the respondents feeling worse off both in 1954 and 1958. But inflation leaves no visible scars. The most favorable appraisals in the 1950's (23 per cent felt worse off) came in 1956 and 1957, years of high employment and rising prices. Every January-February survey since 1965—including January 1969—has yielded more favorable appraisals ("worse off" no higher than 20 per cent) than any year prior to 1965. In two interim surveys during the spring and summer of 1969 (and two in the summer and fall of 1966), however, "worse off" jumped to 25 per cent; perhaps it is the cooling off and not the heating up that creates discomfort. Despite the nagging problems of income redistribution, the American public apparently does not consider itself pressed to the financial wall when rising prices are accompanied by rapidly rising incomes.

Balance-Sheet Effects

In my judgment, the impact of inflation on balance sheets is considerably more serious than that on income statements. In the first place, inflation deprives people of the opportunity to save in a form that gives them a predictable command over future consumption goods. In a noninflationary environment, people can acquire various liquid assets, earn a reasonable return on them, and count on them as the means to acquire a basket of consumer goods in the event of especially large needs or declines in income. To be sure, they can never get a guarantee of future tuition costs, or the prospective price tag on their retirement home, or charges for large medical needs. But these risks are much less serious than those associated with general inflation.

When over-all prices are rising rapidly, their exact course is bound to

be unpredictable. If we all knew that 4 per cent a year inflation would last through the next decade, nominal interest rates would probably become adjusted to levels offering a reasonable real return, and people would know how much of a consumer market basket their savings accounts could command in 1980. But there simply can't be great confidence that the price level will rise *steadily* at any substantial rate, such as 4 per cent. Only if the Government is committed to limit the rise to a creep not much above 2 per cent can there be reasonable predictability.

The opportunity for safe saving is lost in a period of sizable and unpredictable price increases. Some assets offer a degree of protection against inflation in the sense that their values are likely to move up as consumer prices rise. But no asset shows a good year-by-year correlation with prices; even corporate equities and real estate are not good anti-inflationary hedges by this test. They may actually tend to outpace the price level on the average in the long run, but only with wide swings and great uncertainty.

Our financial system ought to serve both investors who want to earn maximum returns (and are willing to take substantial risks) and holders of reasonably safe assets who view their saving largely as deferred consumption. The latter are not accommodated during inflation; we thereby lose "savers' surplus." Inflation creates in this way an unhappy division of savers into "sharpies" and "suckers," if I may borrow some nontechnical terminology. The former make sophisticated choices and often reap gains on inflation which do not seem to reflect any real contribution to economic growth. On the other hand, the unsophisticated saver who is merely preparing for the proverbial rainy day becomes a sucker.

The loss of the opportunity to hold a reliable store of value may be costly even for a person who has never suffered a real capital loss on a bond or deposit. But people have suffered substantial real losses in 1965-69 and these must be taken into account. Some have been compensated, at least in part, by higher nominal interest yields. Furthermore, most claims of Americans have their counterparts as debts of other Americans, and the changing real value is a transfer from lender to borrower. However, in the case of the \$300 billion net debt of the Federal Government, the lender is made worse off with no corresponding gain on the part of the borrower, since presumably Uncle Sam doesn't really feel relieved by the reduced real value of the public debt. Our 7 per cent of inflation has lowered the real value of that debt by about \$21 billion. In September 1969, the average interest rate on Federal marketable debt was about 1.7

percentage points higher than in mid-1965. Over the whole period, the compensatory rise in interest rates may have neutralized as much as half of the decline in real value, but the net loss is still a tidy sum.

Even when the losses of lenders are matched by real gains of borrowers, these do not necessarily cancel out from a social point of view. For good reasons, many borrowers do not feel much better off when the real value of their debt shrinks. Few mayors or governors have had cause to celebrate the \$7 billion decline of real value on their \$100 billion of outstanding debt. Many homeowners feel no exhilaration about the benefits from the declining real value of their mortgages until and unless they are selling their homes. Finally, the transfers between sharpies and suckers is a matter of concern to society. The most significant real losses are probably incurred by the sizable group of families in middle and upper-middle income brackets whose liquid assets are substantial and often not offset by large mortgages. The aged seem especially vulnerable on capital account, just as they are on income account. Except for the aged, few low-income families have large holdings of liquid assets; hence the poor are not particularly vulnerable to the loss of real value.⁷

Inflationary distortions of balance sheets have important implications for the entire financial system. The efficiency of investment in physical capital is enhanced by a system that allows investors to borrow and thus to acquire real capital beyond their net worth. But opportunities to borrow depend upon incentives to lend, and these in turn are jeopardized when the predictability of the real value of claims disappears. Our financial system shows remarkable ingenuity in a time of inflation; witness the veritable revolution of 1968–69 in the financing of apartment houses through “equity kickers,” special features of mortgages that make them resemble convertible bonds. But there is no complete escape from the important negative impact of an inflationary environment on debt markets.

Lessons of the Tally Sheet

Both the costs of inflation and the costs of curing it are significant and serious. We learn to hate that trade-off and wish it would go away. Still, the concrete evidence would not warrant the prediction that another half year of inflation will turn the financial district of lower Manhattan into a desert, or that a half-point rise in the unemployment rate will generate rioting in the streets uptown. The stabilization policy choices we face are indeed important, but they don't have quite the drama that is sometimes attributed to them.

The tally sheet reveals excellent reasons why the American public will not accept inflation as a way of life. Implicitly or explicitly, the Government is obliged to set some ceiling on the tolerable rate of price increase, and it will be guided by the general agreement I noted at the outset: we tolerate rates of price increase of at least 1.5 per cent, while those approaching 3 per cent or more are considered intolerable. When we start from an inflationary position, the Government need not decide exactly where the wheel should stop. Rather it must get a deceleration of prices firmly under way, observe how the trade-off operates, and see how public attitudes respond. By testing the terrain, we can hope to come out with a socially tolerable compromise on rates of unemployment and rates of price increase.

Our policies must recognize the danger that very rapid rates of price rise may feed on themselves and accelerate over time. This danger has been highlighted in some recent research.⁸ Under some assumptions about the workings of markets, the extra employment and output associated with excess total demand will either vanish ultimately or else be accompanied by accelerating prices. Assuming that society will not accept ever faster rates of price increase, it cannot maintain the bonus of output and jobs permanently. Thus, in the long run, the trade-off disappears. Given the institutional structure, society cannot opt for a maintained unemployment rate below some "natural" minimum.

This model surely has *some* relevance to the real world. Many of the beneficial side effects associated with excess demand seem to depend on surprising, cheating, and frustrating people. Once the "suckers" learn their lesson, a tendency must emerge toward accelerating prices or retreating rates of utilization. This is the fatal flaw in proposals designed to help us live with inflation by alleviating its worst redistributive effects. Tying money incomes to cost-of-living escalators, selling cost-of-living bonds, etc., might well either speed up inflation or jeopardize the bonus of output and employment. A comprehensive effort to provide insulation against inflation could prevent the cooking as well as the burning.

In my judgment, however, the nonacceleration criterion is not a dependable guide. The long run seems too long to be particularly relevant. It is apparently a matter of decades rather than years. As Milton Friedman has said, "... there are many examples in history when you have had several decades of generally rising prices or of generally falling prices

without the price rise accelerating or the price decline turning into a collapse.”⁹

All in all, the main reason to curb 4 per cent inflation is not that it may ultimately turn into 8 per cent, but rather that 4 per cent is already a source of serious distortion.

Structural Policies

The tally sheet underlines the high premium on any anti-inflationary policies which can improve the terms of the trade-off. Obviously, fiscal-monetary policies must be our main line of defense against inflation. But they can be reinforced by other measures which may ease price pressures without sacrificing growth and employment. The precise terms of the trade-off depend on our institutional framework: the intensity of competition, the mobility of resources, and their adaptability to alternative uses. These factors, in turn, are influenced by a host of decisions and developments in the private economy and by a multitude of Government policies. The Government can aid the trade-off by tailoring its manpower programs to improve the flow of jobless men into unmanned jobs; it can help break bottlenecks in particular industries like construction and health care. It can reverse policies which now add significantly to costs and prices in many areas. It would not be hard to design a legislative program that would knock a full percentage point off our price indices by restructuring a number of government programs. My candidates would include: repeal of enabling legislation for “fair trade,” elimination of Government-imposed floors on rates in transportation industries, an overhaul of the oil import quota program, and a restructuring of agricultural programs which pass the cost of the subsidy to the farmer into the consumer’s food bill.

Finally, a comprehensive program to achieve noninflationary prosperity should include a major effort to enlist the voluntary cooperation of large firms and labor unions with substantial market power. Prices and wages in the American economy reflect both market competition and market power. In many important areas, management and labor have a good deal of discretion over prices and wages. How they exercise that discretion can be influenced by the attitudes of the Federal Government. When at the start of the Nixon administration, the President expressed his strong opposition to the use of the jawbone, his words were interpreted as a declaration of open season for price and wage increases. That judgment was reflected in the prices of many concen-

trated industries (as shown in the Appendix). The price record during 1969 of gasoline, automobiles, steel, copper, and other metals has been far worse than that of 1968. The controlled experiment of 1969 gives me confidence in concluding that, even during the excess demand inflation of 1968, White House persuasion had a favorable impact on administered prices.

Once the Government began to carry out properly its job of fiscal-monetary restraint, it moved into an excellent position to ask for help from private decision makers. To capitalize on that opportunity, we need a new program of voluntary restraint. I believe the essential ingredients for such a system can be spelled out in light of the experiences—and the mistakes—of the Kennedy and Johnson administrations.

First, in seeking cooperation from private decision makers, the government must carefully ensure that its actions promote a noninflationary environment. Discipline in fiscal and monetary policy is the first requirement. The structural policies that influence prices and costs must also be in harmony. To take a notable example, the government cannot reasonably ask private workers to restrain their wage demands if the pay scales of government employees are shooting ahead.

Second, the appeal for restraint must be based on ground rules that spell out what private decision makers are being asked to do. "Drive carefully" is just not an effective substitute for a posted speed limit. Speed limits on wages and prices will inevitably share some of the imperfections of posted speed limits on the highways. They will contain an element of arbitrariness, just as a fifty-mile speed limit is arbitrary in the sense that it is not demonstrably superior to forty-nine or fifty-one. Just as a passing lane is needed on the highways, so a "passing lane" must be provided for wages and prices, allowing relative shifts over time in response to the signals of the market. Just as some speeders will escape the eyes of the traffic patrol, so some violators of the price and wage standards will not be identified. Despite their imperfections, posted speed limits on the highways serve the nation well and so can speed limits on prices and wages.

Third, the standards should be developed only after the fullest consultation with business and labor. Private interest groups should have every opportunity to express their views and to identify problems which might not otherwise be recognized. Persuasion can be most effective if it is coupled with representation.

Fourth, the one sanction essential and appropriate in a voluntary restraint program is the force of public opinion. Flagrant violations of the standards must be exposed to public scrutiny. Except for the glare of the spotlight, violators should have impunity. The one issue that may pose some difficult questions is the appropriate use of procurement, stockpiles, tax and foreign trade policies to serve the public interest of price stability.

Fifth, because many price and wage decisions are complex, some responsible and competent authority must call foul balls. But to minimize shouting matches, the umpire should be at least an arm's length away from the President of the United States—and that means farther away than his Council of Economic Advisers. In my opinion, the ideal umpire would be a small special advisory board on price and wage standards, such as Congressman Henry Reuss has proposed. Its members should be experienced in the decision process of the collective bargaining table and the top management meeting, but should not be active partisans at the time of their appointment. Some of our labor mediators and arbitrators and some of our business school deans could carry out this assignment with distinction. The group should be appointed by the President and should consult with executive agencies as well as private and congressional groups. It should be explicitly authorized to issue public statements and reports without clearing them through the administration.

I cannot be confident that such a system would function effectively. But I am confident that an experiment along these lines is worth the effort. By not trying hard enough currently, we are handicapping our efforts to reconcile prosperity and price stability. And we cannot afford even a small handicap in this vital and difficult contest.

In endorsing structural approaches, let me emphasize that mandatory controls on prices and wages do not belong on the list of acceptable remedies. Mandatory wage and price controls ensnare the market in a web of bureaucratic red tape. They ask government officials to carry out the impossible assignment of substituting for our market mechanism in making judgments about relative movements of wages and prices. They are bound to lead to bare shelves and quality deterioration, if they are really effective in holding down prices. Although controls may be popular when they are not in effect, the housewife would find that she disliked their consequences even more than rising prices. Controls were never seriously regarded as a meaningful alternative during the Johnson administration; and they aren't, I am sure, any more popular in the

Nixon administration. They deserve the total scorn and rejection of all informed opinion.

Obligations to the Poor

The tally sheet underlines the problems of the poor in a period of disinflation. To be sure, some of the poor have a stake in price stability: the aged, recipients of public assistance, and those few with substantial holdings of liquid assets. By any reasonable assessment of the total impact, however, these costs of inflation are swamped by the benefits to the poor of a strained labor market where a job beats a path to their door.

Let me emphasize, however, that inflation is an inefficient antipoverty program; certainly we can design better ones at less total cost to the nation. Society has a special debt to the poor to emphasize antipoverty-program efforts when the economy is being slowed down deliberately to cure inflation. Improvements in unemployment compensation benefits to the innocent victims of economic slowdown can help pay part of that debt. More generally, we need not tolerate either poverty or persistent inflation. The shame of poverty can be eliminated in ways consistent with stability for the entire economy.

The Case for Gradualism

Finally, the tally sheet supports the case for restoring price stability without destroying high-employment prosperity. Gradual disinflation was a basic commitment made by the Nixon administration at the outset, and it has maintained that position faithfully. Undoubtedly, that very commitment made the task of curbing inflation all the more difficult. When the administration first articulated its strategy, it sounded to the business community like nine parts gradualism and one part disinflation. Many observers had expected a new Republican administration to put price stability above all other economic objectives and to take significant risks of sacrificing prosperity through a massive restriction of demand. Both those who had hoped it would do this and those who had feared that it would were surprised that it didn't.

In my view, the commitment to continued prosperity has been the best news on economic policy of 1969. Even though the gradualist strategy has tested our faith and our patience at times, it has been a valuable investment. And I believe that the message is finally getting through that the U.S. Government puts equal weight on the two parts of the gradual disinflation formula.

Because of our imperfect wisdom, any policy that seeks the middle of the road runs some danger of going off the road on either side. We can't be sure that a policy of economic slowdown will in fact properly curb inflation or that it will in fact avoid recession. All we can do is balance the risks and remember the costs on both sides. It is especially difficult to balance them objectively when our memories of recession have become dim while our experiences of inflation are vivid. If over the next year unemployment were to rise to 7 per cent as it did during the 1957–58 and 1960–61 recessions, the illustrative costs of the slowdown as set forth above would have to be multiplied by nearly five: nearly \$100 billion of output and real incomes; roughly \$30 billion of before-tax profits; more than 3 million people pushed below the poverty line; and 6 million workers seriously affected by unemployment. By any reasonable standard, such an episode would impose far greater costs on the nation than those of the entire recent four years of inflation. It is terribly important to lick inflation without sinking into recession.

I find many analogies between accepting anti-inflation policies as a nation and going on a diet as an individual. Overeating is lots of fun and fundamentally enjoyable. Going on a diet is painful, and it brings few results in the short run. Procrastinating is never terribly serious; for the next bite will never kill you. And there is no clear-cut boundary line between normal weight and overweight. But the more we overindulge and the longer we procrastinate, the more serious the risk becomes. Once we get the message, we are tempted to go to the other extreme and adopt a starvation diet. The choices are never easy and they demand a great deal of maturity. We haven't yet demonstrated whether we have the maturity to adopt a sensible diet as a nation.

The Road to Noninflationary Prosperity

We don't know exactly how much of an economic slowdown for how long is required to cure inflation. But past experience gives us some guides and some understanding of the links between economic activity and prices.

Nonrecessionary Slowdown

Do we know that it is possible to lick inflation without taking a recession in the process? I think we do. Because we used to have recessions very frequently, we slipped into recession shortly after nearly every inflationary period. But there is simply no evidence that the recession was re-

quired to end the inflation (or that it was an inevitable consequence of the previous inflation). In the few instances when a nonrecessionary economic slowdown has been sustained for any period of time, it has significantly influenced prices and wages. To put it another way, we have never had a nonrecessionary economic slowdown which failed to produce a deceleration of prices and wages. Inflation did come to a halt in 1951–52, when the economy slowed down, and I do not believe that the mandatory controls on prices and wages were essential elements in that result.

More recently and more pertinently, the experience of 1966–67 was encouraging. In 1966, a massive dose of monetary restraint offset fiscal stimulus and halted the boom. The Consumer Price Index, which had risen at an annual rate of 4.3 per cent between January and October 1966, advanced at a much slower rate of 2.3 per cent in the next nine months. Aided by a downward correction in raw material prices, industrial wholesale prices plateaued—creeping up at an annual rate of less than 1 per cent between July 1966 and July 1967. That reversal of an inflationary price performance was achieved without a recession, without a major increase in unemployment, with only a minor and brief dip in profits. It gave us an excellent second chance to get on the track of non-inflationary prosperity during the summer of 1967. That chance was bootied when President Johnson's prescription for fiscal restraint was not promptly applied. It could have served as excellent preventive medicine but, by the time fiscal action was actually taken nearly a year later, the task had become cure rather than prevention. Inflation had developed great momentum and private demand had become exceptionally buoyant.

The Disappointing Record of 1968–69

Reflecting that momentum, our 1968–69 experience has been less favorable than that of 1966–67 in two ways: (1) the pace of the economy has shown less response to the dosage of fiscal and monetary restraint, and (2) our price and wage performance has responded less favorably to a slowdown in economic activity.

So far as we can now judge, consumers have curtailed their spending less and correspondingly have reduced saving more than normally in response to the 1968 tax increase. The surcharge has had less bang-for-a-buck than was to be expected on the basis of past experience. Similarly, the public has reacted to tighter money by economizing on cash balances and liquidity to a much greater extent than in 1966. For example, the path of the money supply between July 1968 and October 1969 was very

similar to that in the fifteen months following mid-1965. In the 1965–66 period, the impact of tight money on economic activity was evident by April 1966 and dramatic by September. This time, private spending has been far more obstinate.

In retrospect, it is easy to judge that the dose of fiscal restraint should have been even larger in mid-1968 and that it should have been backed up immediately by monetary restraint. Still it is important to note that policy actions worked in the right direction. Economic activity did change pace when the fiscal program was enacted. GNP, which had advanced \$43 billion in the first two quarters of 1968, rose \$34 billion in the next two quarters. If it had advanced as rapidly in the five quarters after the enactment of the tax increase as it had in the preceding two quarters, our GNP would have been \$965 billion rather than \$942 billion in the third quarter of 1969. The moderation in the growth of real output was even more marked—from 6.5 per cent in the first half of 1968 to 3.5 per cent in the second half and 2.5 per cent in the first half of 1969.

Given the change of pace in economic activity, the price record of 1969 has been disappointing. With the marked slowdown in real growth, it is surprising to find an actual acceleration of prices this year. Between December 1968 and October 1969, the Consumer Price Index rose at an annual rate of 6 per cent—more than one percentage point faster than during 1968. And the GNP deflator has been moving up at a 5 per cent rate, again topping the 1968 experience by about 1 percentage point. Some of this stubbornness of prices reflects bad breaks: the huge jump in meat prices has been only remotely related to general developments in the economy; the escalation of mortgage interest rates, which gets a big weight in the Consumer Price Index, results from the monetary restraint administered to curb the boom as well as the potency of inflationary pressures.

The main element in the stubborn climb of prices and wages through most of 1969 was the enormous strength of demand for labor. After years of operating in a tight labor market, businessmen hired aggressively both to catch up and get ahead. They added far more workers to their payrolls than would have been dictated merely by shortrun needs. Between mid-1968 and mid-1969, for example, wholesale and retail trade added 600,000 employees or a 4.5 per cent rise in their work force, while the volume of real goods flowing through trade barely increased. Such personnel policies get reflected in sagging productivity, a substantial ad-

dition to unit labor costs, and continued tightness in labor markets; the result is more inflationary pressure on both prices and wages.

Employment increases slowed down markedly after mid-1969. This development points toward a relaxation of upward pressures on wages and of the upward pressure of costs on prices. As a result, I believe the deceleration of prices will become visible at long last. In the first half of 1970, we should see some improvement in our price performance—perhaps small, shaky, and spotty at first. Under no circumstances will the 1970 price record look good; but any deceleration visible to the naked eye will be a great victory. The demonstration that price increases are slowing down can make the essential difference in the expectations and attitudes of the American public. Once things get moving in the right direction, the momentum will start working for us rather than against us. Each round of price increases will reflect smaller cost increases behind them, and each round of wage increases will reflect smaller advances in the cost of living that need to be made up.

I would expect collective bargaining wage settlements to be the last to slow down, just as they were the last to speed up. A substantial acceleration of wages centered in unorganized areas in late 1965 and during 1966 before collective bargaining settlements hopped onto the inflationary bandwagon. Similarly, the wage deceleration bandwagon can get rolling before union settlements climb aboard. The balance of power at the bargaining table will ultimately reflect the economic atmosphere. More squeeze on profits and less squeeze on capacity—which means less cost of a strike—both can stiffen management resistance to inflationary wage demands.

We sometimes hear the contention that nothing short of recession will decelerate prices. That assertion rests on the view that inflationary psychology is so deeply rooted that it can be shaken out only by an upheaval in the economic environment. I have trouble following that argument, and I suspect immodestly that the fault lies in the argument rather than in me. Economists know pitifully little about how price expectations are formed and how they influence other economic decisions. We do know that private demand has been especially buoyant in the past year. No doubt price expectations must have been important in triggering off some spending decisions, particularly in construction projects where costs were moving up rapidly. But the lofty levels of market interest rates—as also affected by price expectations—should have offset much of the incentive

to beat rising prices to the punch. Moreover, the behavior of inventories suggests that inflationary expectations could not have generally dominated business decision making. It is surely easier to hedge against or speculate on price rises by holding added inventories of materials and supplies than by rescheduling capital projects; yet inventory demand was geared conservatively to business needs during the boom. In any case, the key fact is that over-all demand is no longer surging ahead. Demand has been brought under control, even though inflationary psychology has not been uprooted, as far as we can tell.

Quite apart from any influence on aggregate demand, inflationary expectations could still give the nation trouble by influencing wage and price decisions. But I strongly doubt that these are based heavily on long-term forecasts. Labor's case for substantial wage hikes rests on looking backward to the cost-of-living increases of the past—not on projecting the future. Businessmen find the basis for price increases in past rises of costs and in current and near-term markets. It seems quite likely that price behavior will be less stubborn than price expectations, and that inflationary performance will improve before inflationary psychology is cured. Once prices begin to slow down, we may get extra help from the shift in psychology.

It is important to distinguish between inflationary expectations and prosperity expectations. To be sure, both may have added to aggregate demand and complicated the task of disinflation in 1969. For the long run, however, prosperity expectations are as desirable as inflationary expectations are undesirable. Confidence by businessmen, consumers, and workers in the health and strength of the American economy can contribute to our economic efficiency, and enhance the willingness to innovate and to provide the capacity for growth. Major uncertainties about economic activity add to business costs and require inefficient hedges against recession. We want the kind of economy in which Americans have justified confidence in reasonably steady and sustained growth.

The Long-Term Compromise

As I read our historical record, it supports the optimistic judgment that the gradual cure of inflation will not require a prolonged period of economic sluggishness or a major retreat in utilization rates. The American economy has already demonstrated in the sixties its capacity to support noninflationary prosperity with an unemployment rate no higher than 4.5 per cent. In July 1965, when Vietnam first became a significant eco-

nomic force, the unemployment rate was 4.5 per cent. Both consumer prices and the GNP price deflator were about 1.75 per cent above their levels of a year earlier.

Labor costs were remarkably stable in both organized and unorganized areas. In the spring of 1965, unit labor costs in both the total nonfinancial corporate sector of the economy and in manufacturing were actually *below* their levels of a year earlier. Productivity advanced briskly and wage rates rose only modestly; thus unit labor costs behaved very well, even though the amount of work paid for at premium overtime rates had expanded significantly.

The average of wholesale industrial prices was within 1 per cent of its level at the beginning of 1961. It had risen 0.5 per cent during the course of 1964, mostly because of nonferrous metals prices which were pushed up by world supply problems. During the first half of 1965, industrial wholesale prices rose 0.6 per cent, with increases more widely dispersed. In manufacturing industries with rapidly rising productivity, price declines, which had previously been common, were going out of style. Yet very few large firms with market power were raising prices to widen profit margins; and there had been no further confrontation between business and Government like that in April 1962 when President Kennedy had strongly condemned an increase in steel prices.

To be sure, the price record of 1964 and the first half of 1965 was distinctly different from that of earlier years. But it had been recognized all along that the achievement of a high-employment economy would necessarily involve some retreat from the exceptional price stability of the early sixties. When the slack in resource utilization was taken up, it was no surprise to find a departure from the virtually absolute stability of industrial wholesale prices that had ruled in earlier years. The deterioration in our price performance was relatively small and readily tolerable. This was not inflation, by any standard I know.

Yet, this is a matter of some controversy: Arthur Burns has said "inflation had already taken hold and become widespread many months before Vietnam began adding appreciably to aggregate monetary demand."¹⁰ This historical issue has critical implications for the future. If it were true that we got into the inflationary soup in 1964 when unemployment exceeded 5 per cent, it would be hard to imagine how we could now get out of that soup without retreating to a similarly high unemployment rate. That would mean doubling the illustrative figures I presented at the outset on the costs of the required slowdown.

As of mid-1965, it was my best judgment that we could continue a well-balanced advance with unemployment gradually declining further to a 4 per cent rate in 1967 with an annual rate of price increase close to 2 per cent. That looked like a tolerable and feasible compromise in the agonizing balance between growth and price stability. Unfortunately, that scenario could not be tested. The initial impact of the Vietnam escalation in the second half of 1965—both directly and through its stimulus to business investment—generated a disruptive boom. The growth rate of real output accelerated dramatically from 5.5 per cent in the first half of 1965 to 8.5 per cent in the next three quarters. This was obviously faster than anyone expected or wished. Our price performance was unhinged by the speed at which we proceeded as well as the low levels of utilization that we reached. The economy had especial difficulty adapting to the breakneck advance, running into limitations on the speed of adjustments of supply in raw materials, and limitations on the speed with which manpower training and upgrading could take place. In a smoother advance, we could have done better.

If we look beyond the immediate problem of correcting inflation, the achievement of a 4-2 combination is, I would concede, on the optimistic end of the plausible range, given our existing institutions. If, however, we reinforce an effective and disciplined fiscal-monetary policy with vigorous and courageous structural policies, I believe that combination can be made realistic—and that over time we can even improve on it. The pessimistic end of the plausible range, in my judgment, is still not a vast distance away. I would be surprised if the feasible combination over the long run proved to be worse than an unemployment rate of 4.5 per cent and a rate of price increase of 2.5 per cent.

The experience of recent years has generated excessive pessimism about the trade-off, in my view. I have been told that, in their planning models, some business and financial executives are projecting an average annual rate of price increase of 4 per cent for the whole decade of the 1970's. I would remind them of the long-term forecasts made early in the sixties which envisioned years and years of continued slow growth, sluggishness, rising unemployment, terrifying consequences of automation, stagnant investment, and sagging profits. But the nation woke up to the costs of a slack economy; and we grew and grew—sometimes not wisely, but all to well.

When the seriousness of an economic problem gets fully recognized in

our political process and the nation becomes determined to solve it, we usually succeed. (To be sure, the solution may create or aggravate other problems.) The United States is now alert to the problem of reconciling reasonable price stability with high-employment prosperity. Just as the great victory of economic policy and performance of the sixties was to establish prosperity as the normal state of affairs in the American economy, I would predict that the seventies will witness a tolerable reconciliation of that prosperity with reasonable price stability.

Appendix: The Controlled Experiment of 1969

In January, 1969, President Nixon made clear his intention not to attempt to influence particular price (and wage) decisions in the private economy. This pronouncement represented a discrete shift from the policies of the Johnson administration. During 1969, a very marked acceleration of prices took place in those industries which had been responsive to Government appeals and criticism from 1966 to 1968. According to the evidence set forth below, somewhere between $\frac{1}{2}$ and 1 per cent of extra inflation in the industrial wholesale price index may be attributed to the shift in policy. Since the index of industrial wholesale prices rose 4.0 per cent during 1969 as compared with 2.5 per cent during 1968, that extra price increase represents between one-third and two-thirds of the *acceleration*.

In the table, I have listed those published components of the wholesale industrial price index which I believe were directly responsive to administration persuasion in one or more specific instances during the 1966 to 1968 period. Obviously, some judgment was required to compile that list, but inclusion or exclusion of borderline cases does not change the results appreciably. The big items—steel, copper, aluminum, petroleum, automobiles—are not on the borderline. Specific instances of White House appeals for restraint to these industries and several others are on the public record. Naturally, I was aware that 1969 price performance was not an appropriate criterion for inclusion. Nonetheless, I wish I had formulated the list (and had it notarized!) in January, 1969. For lack of a better term, I shall call these “responsive prices”—that is, responsive to White House persuasion, from 1966 to 1968.

The list of responsive prices is confined to “jawbone” cases; it excludes such items as lumber and hides where prices were influenced, in my judgment, by other structural policies. Finally, the list is limited to the

Table 1 Changes in wholesale prices of selected industrial commodities (1969 compared with prior periods)

	Relative impor- tance ^a (per cent)	(Annual rate) per cent change ^b					
		1969	1966– 1968	1968	1967	1966	1961– 1965
Selected petroleum products							
Gasoline	2.772	3.5	–.6	–.9	–3.6	2.8	–.9
Crude	.843	4.8	1.0	.7	.9	1.2	–.1
Middle distillate	1.053	3.7	2.0	–1.3	5.9	1.6	.4
Sulfur products							
Sulfur	.104	–33.3	18.1	7.7	39.3	9.8	1.6
Sulfuric acid	.085	0	9.9	3.7	21.0	6.0	1.7
Tires and tubes	1.221	2.2	3.0	1.7	4.2	3.1	–.2
Paperboard	.669	5.0	–1.8	–2.8	–3.3	.7	–.1
Glass containers	.375	5.3	3.3	9.1	0	1.1	.6
Cigarettes	.890	6.6	3.6	1.6	5.0	4.2	.8
Newsprint, standard	.426	3.3	2.2	0	2.1	4.6	–.3
Photographic supplies	.346	3.4	2.2	2.0	5.1	–.5	.8
Passenger cars	5.818	1.9	1.2	1.2	1.9	.3	–.7
Tin cans	.301	2.7	2.3	3.0	4.1	0	2.3
Laundry equipment	.242	1.2	1.7	2.4	2.8	–.1	–1.3
Selected steel products							
Finished	4.247	6.8	1.6	2.2	1.3	1.3	.4
Semi-finished	.272	5.7	1.4	.3	2.9	1.0	.3
Selected nonferrous metals							
Aluminum ingot	.143	8.7	1.7	3.0	2.0	0	–1.2
Aluminum ingot, alloyed	.058	7.2	2.5	4.6	1.9	1.0	—
Aluminum shapes	.660	6.7	1.2	2.4	1.1	.2	–2.5
Copper wirebar	.386	24.3	5.3	10.2	5.9	0	3.7
Copper and brass shapes	.743	27.9	4.1	–4.2	5.7	11.5	3.6
Wire and cable	.809	22.2	1.7	–3.8	2.3	7.0	3.5
Listed items	22.463	6.0	1.7	1.0	1.9	2.1	0.1
All other (nonlisted) industrials	77.537	3.5	2.3	2.9	1.9	2.3	0.5
All industrials	100.0	4.0	2.2	2.5	1.9	2.2	0.4

a. Fraction of *industrial* wholesale price index in December, 1968, accounted for by commodity.

b. Year figure represents change *during* year—e.g., 1969 is period from December, 1968, to December, 1969, and 1966–1968 is thus December, 1965, to December, 1968.

product prices that were responsive in a fairly direct manner. For example, I did not include machinery made of steel, although its price is affected indirectly by steel prices.

The responsive list accounted in December, 1968, for 22.5 per cent of the total weight in the index of *industrial* wholesale prices, or 16.5 per cent of the comprehensive wholesale price index (which includes farm, food, and feed products as well as industrials). The relative importance of the listed items varies greatly—passenger cars get 100 times the weight of alloyed aluminum ingot.

From 1961 to 1965, prices of the responsive group were especially stable. Between December, 1960, and December, 1965, the index for the responsive group rose only 0.1 per cent a year, on average, while the index for all other (i.e., nonlisted) industrials crept up at an average annual rate of 0.5 per cent. No clear inference about the impact of price guideposts can be drawn directly from this differential in over-all price performance.¹¹ The responsive group is not a typical or random selection of industrial products in any sense; and their prices, as a group, cannot be expected to behave exactly like other industrials. During the early sixties, some of the listed products displayed exceptional productivity advances, which could account for the better price record. The appeals from the Government during the period were broad rather than pinpointed, apart from the celebrated episode of April, 1962, involving steel prices.

During the inflation of the next three years, 1966 to 1968, the price index of the responsive group rose at an annual rate of 1.7 per cent; meanwhile all other industrials advanced at an annual rate of 2.3 per cent. In each of those three years, the percentage increase of the price index of the responsive group was no more than that of all other industrials, even though demand grew especially strongly for many of the listed items. Again, the over-all differential cannot be reliably attributed to Government appeals for restraint, although several specific rollbacks and reversals of announced price increases provided evidence of some stabilizing impact.

The events of 1969 provide a much better basis for making a judgment. The distinct shift in White House posture produced a situation about as close to a controlled experiment as we are ever likely to find in observing the inherently complex relationship between private decisions on prices and the attitudes of Government officials. In light of the three—indeed eight—previous years of experience, anyone who believed that the

responsive prices, as a group, had not been influenced by White House persuasion should have expected them to rise no more rapidly than other industrials in 1969.

However, during 1969, they advanced 6.0 per cent, substantially faster than the 3.5 per cent average increase of all other industrials. The acceleration of prices for the responsive group was 4.3 per cent over the average of the 1966 to 1968 period, while that for all other industrials was only 1.2 per cent. To put it another way, the index of responsive prices rose $3\frac{1}{2}$ times as rapidly during 1969 as during 1966 to 1968, while the index for other industrials increased $1\frac{1}{2}$ times as fast as previously. And the pattern of marked acceleration was widespread, extending to petroleum, steel, copper, aluminum, passenger cars, glass containers, cigarettes, newsprint, photographic supplies, and paperboard. The exceptions were sulfur products, tires, tin cans, and laundry equipment. There were exceedingly few new wage settlements that could have accounted for any acceleration. To be sure, special supply forces encouraged price rises in some areas—just as they generated a major decline in sulfur. But the pronounced and pervasive pattern cannot be reasonably explained as resulting from “bad breaks.”

I have heard it conjectured that moral suasion was beginning to lose its grip in any event before the change of administration. The facts of 1968 do not fit that conjecture. During 1968, the differential between the responsive group and other industrials was especially wide: the former rose 1.0 per cent while the latter advanced 2.9 per cent. Surely, the 1968 result was atypical—benefiting particularly from price declines in important petroleum and copper products, when supply eased. But any reading of the 1968 record will reveal no emerging tendency for the price performance of the responsive group to deteriorate relative to other industrial products.

Indeed, in light of the facts of 1968, skeptics may be tempted to embrace an alternative hypothesis, which I have never heard so far. It would conjecture that 1968 was an unusually “lucky” year in the price performance of the responsive group, and that the 1969 acceleration represented an unwinding of favorable transitory factors. But on that hypothesis, the acceleration in 1969 should have been concentrated in those commodities whose price performance had been especially favorable in 1968. It was not.

I conclude that the shift in Government policy is central and crucial

to the explanation of the especially large speedup of the responsive prices during 1969.¹²

It is exceedingly difficult—and yet essential—to convert this judgment into an estimate of the effect on the over-all level of industrial prices. Obviously, the issue is whether and how much over-all inflation was stimulated by the shift in policy. Paul McCracken has said: “We are concerned with restraining the average level of prices, and restraining even a significant number of individual prices and wages may not restrain the average level but may only divert inflationary pressure and make other wages and prices rise more.”¹³

One can, indeed, conceive of full diversion of inflationary pressure as an extreme possibility. But I suggest that *no* diversion of inflationary pressure is a much more realistic working assumption.

First of all, *no* spillover of spending will occur unless, as a result of price restraint for some items, fewer dollars are spent on those products (and hence some part of a given total of spending is diverted elsewhere). Fewer dollars will be spent on the items with restrained prices only if either (a) the price restraint makes it unprofitable for suppliers to meet demands; or (b) demand is price-inelastic so that quantities demanded respond less than proportionately to lower prices of the listed items. Copper and sulfur were the only ones, to the best of my knowledge, which fit condition (a)—they showed excess demand at times in recent years. Elsewhere suppliers continued to meet and greet all demands for their products, indicating that prices still exceeded costs on the margin. Hence, sales and output were stimulated because prices were held down.

Cigarettes are the one item on the list where I am aware of statistical research demonstrating that (b) applies, i.e., demand is price-inelastic. It would be most hazardous to judge that the listed items have, on the average, price-inelastic demands. And only on such a judgment would there be a presumption that *any* spillover of spending occurs.

Even if some spending spilled over onto other industries, that diverted spending would add to output and employment as well as to prices in those areas, so long as firms were not operating at an absolute ceiling of their productive capacity. The full benefit of the restraint would then be split between some favorable net movement in over-all prices and some more favorable path of output and employment.

Finally and most important, any undesired spillover can, in principle, be mopped up by fiscal-monetary action. Whatever the ideal criteria

for monetary policy may be in a period of gradual disinflation, an effective program of restraining some prices allows the Federal Reserve to aim for a slightly lower level of aggregate dollar spending than otherwise, without any greater sacrifice of output and employment. A selective program of restraint will generate a "trade-off dividend"; just how that dividend is divided between lower prices and more output depends on monetary-fiscal decisions.

An assessment of the over-all effect must take into account several forces which tend to magnify or multiply the direct benefits of restraint on the responsive prices. As I noted above, many industries not on my list use steel, copper, aluminum, and other responsive items as inputs; their costs, and presumably their average prices, would have been lower if the responsive prices had been restrained. Similarly, because wage increases are influenced by the cost of living, restraint on selected prices will tend to hold down average wage costs, and hence other prices. Furthermore, a policy of seeking restraint in price decisions can be accompanied by, and reinforced by, an effort to restrain wage settlements. Finally, concern with public opinion and with the public interest may exert a deterrent effect on the pricing decisions of some industries which are never identified as responsive to appeals. I am prepared to judge that, if the responsive prices had been restrained, the other industrial prices would probably have risen somewhat less than they actually did during 1969.

In summary, while I would not hazard a pinpointed estimate of the over-all cost of the policy change, I can reasonably offer a plausible lower and upper limit. To get the lower end of the range, let me suppose that, if the policy of Government persuasion had continued:

- a. the nonlisted prices would not have been affected at all during 1969—even though I believe they would have been favorably affected, on balance; and
- b. prices in the responsive group would have matched the pace of other industrials—even though they had consistently risen less rapidly prior to 1969.

Under those conditions, the industrial wholesale price index would have risen 3.5 per cent (rather than 4.0 per cent) during 1969, reflecting a 3.5 per cent rise of nonlisted prices (as actually occurred) and a matching 3.5 per cent advance of the responsive group (rather than 6.0 per cent).

I regard this half of a per cent as a reasonable lower limit. It seems

equally plausible on the higher side that a continued policy of persuasion might have held down the rise in the industrial wholesale price index by a full percentage point; a 3.0 per cent advance would have resulted if

- a. prices in the nonlisted group had increased 3.2 per cent, improving by 0.3 per cent as a result of somewhat lower material and wage costs and some deterrent influence, and
- b. responsive prices had risen 2.4 per cent, maintaining their average 1966 to 1968 relationship to the increases in other industrial prices.

Whether the better estimate is 0.5 or 1.0 per cent or something in between, it represents a significant handicap in our vital national effort to achieve noninflationary prosperity. And that handicap is continuing and influencing prices and wages generally as 1970 begins.

Notes

I am indebted to William Rutledge for assisting in the research.

1. The Consumer Price Index also dipped in 1955.
2. While it is convenient and customary to rely on annual averages, such statistics may not significantly reflect new price trends within the year. This is most pronounced for 1950—price increases from the end of 1949 to the end of 1950 are clearly of inflationary size, but the annual averages for 1950 are only modestly higher than those for 1949. Likewise, as measured from the end of 1955 to the end of 1956, the year 1956 would be classed as inflationary.
3. Arthur M. Okun, "Potential GNP: Its Measurement and Significance," 1962 Proceedings of the Business and Economic Statistics Section of the American Statistical Association, pp. 98–104.
4. *Statistics on Manpower, Supplement to the Manpower Report of the President*, March 1969. These calculations are based on Table B-17, p. 47.
5. C. E. Metcalf and J. D. Mooney, "Aggregate Demand Model," unpublished working paper for the Office of Economic Opportunity, 1965.
6. For an interesting discussion of these shifts and some illuminating facts and figures, see Andrew F. Brimmer, "Inflation and Income Distribution in the United States," Paper presented to the Conference on *Input-Output, 1969*, December 2, 1969 (processed), especially pp. 13–16 and Tables 3–6.
7. See Robinson G. Hollister and John L. Palmer, "The Impact of Inflation on the Poor," University of Wisconsin, Institute for Research on Poverty—1969, pp. 40–47; and Dorothy S. Projector and Gertrude S. Weiss, "Survey of Financial Characteristics of Consumers," Federal Reserve Technical Papers—1966, especially pp. 37–41.
8. See Milton Friedman, "The Role of Monetary Policy," in *American Economic*

Review, Vol. 58 (March 1968), pp. 1–17; Edmund S. Phelps, “The New Microeconomics in Inflation and Employment Theory,” in American Economic Association, *Papers and Proceedings of the Eighty-First Annual Meeting, 1968* (*American Economic Review*, Vol. 59, May 1969), pp. 147–60.

9. Milton Friedman, *Inflation: Causes and Consequences* (New York: Asia Publishing House, 1963), p. 20.

10. Arthur F. Burns, *The Business Cycle in a Changing World* (Columbia University Press for the National Bureau of Economic Research, 1969), pp. 287–88.

11. In the case of wage behavior, however, the strong evidence of a guidepost influence during the 1962–1965 period is presented by George L. Perry, “Wages and the Guideposts,” *American Economic Review*, LVII (September, 1967), 897–904.

12. Of course, the especially inflationary performance of the responsive group during 1969 may not be typical of the longer run. The abandonment of the jawbone may have unloosed a particular flurry of price increases that had been contained by persuasion. That would merely demonstrate the effectiveness of the persuasion, so long as it was maintained.

13. Statement of Paul W. McCracken, Chairman, Council of Economic Advisers, before the Executive and Legislative Reorganization Subcommittee of the Committee on Government Operations, House of Representatives, September 23, 1969.