
The student of inflation is tempted to rejoin, “I’ve heard that one before,” to exhortations now emanating from Washington. Since the time of Diocletian, and very probably long before, the sovereign has repeatedly responded to generally rising prices in precisely the same way: by berating the “profiteers,” calling on private persons to show social responsibility by holding down the prices at which they sell their products or their services, and trying, through legal prohibitions or other devices, to prevent individual prices from rising.1 The result of such measures has always been the same: complete failure. Inflation has been stopped when and only when the quantity of money has been kept from rising too fast, and that cure has been effective whether or not the other measures were taken.

The first section of this paper explains why the attempts to hold down individual wages and prices have failed to stop inflation. Direct control of prices and wages does not eliminate inflationary pressure. It simply shifts the pressure elsewhere and suppresses some of its manifestations.

Inflation is always and everywhere a monetary phenomenon, resulting from and accompanied by a rise in the quantity of money relative to output. This generalization is not an arithmetical proposition or a truism, and it does not require a rigid relation between the rates of rise in prices and in the quantity of money. The precise rate at which prices rise for a given rate of rise in the quantity of money depends on such factors as past price behavior, current changes in the structure of labor and product markets, and fiscal policy. The monetary character of inflation, as the second section points out, is an empirical generalization backed
by a wide range of evidence which suggests that substantial changes in the demand for money seldom occur except as a reaction to a sequence of events set in train by changes in the quantity of money. It follows that the only effective way to stop inflation is to restrain the rate of growth of the quantity of money.\textsuperscript{2}

Given inflationary pressure, rises in recorded or quoted prices and wages can be suppressed to some extent. The less severe the inflationary pressure, and the more vigorous and effective the enforcement of price controls, the greater the extent to which the manifestations of inflation can be suppressed. As the third section points out, such suppressed inflation is far more harmful, both to efficiency and freedom, than open inflation, and the more effective the suppression, the greater the harm. It is highly desirable to avoid inflation but if, for whatever reason, that is not feasible, it is far better that inflation be open than that it be suppressed.

The final section of the paper asks what harm, if any, will be done by the guideposts. Even granted that compulsory price and wage controls cannot stop inflation and can do great harm, may not some measure of voluntary compliance by businessmen and union leaders ease the tasks of other instruments of policy and enable businessmen and union leaders to display their sense of social responsibility? In my opinion, the answer is clearly in the negative. Compliance with the guideposts is harmful because it encourages delay in taking effective measures to stem inflation, distorts production and distribution, and encourages restrictions on personal freedom.

Entirely aside from their strictly economic effects, guidelines threaten the consensus of shared values that is the moral basis of a free society. Compliance with them is urged in the name of social responsibility; yet, those who comply hurt both themselves and the community. Morally questionable behavior—the evading of requests from the highest officials, let alone the violation of legally imposed price and wage controls—is both privately and socially beneficial. That way lies disrespect for the law on the part of the public and pressure to use extralegal powers on the part of officials. The price of guideposts is far too
high for the return, which, at most, is the appearance of doing something about a real problem.

I. Why Direct Control of Prices and Wages Does Not Eliminate Inflationary Pressure

An analogy is often drawn between direct control of wages and prices as a reaction to inflation and the breaking of a thermometer as a reaction to, say, an overheated room. This analogy has an element of validity. Prices are partly like thermometers in that they register heat but do not produce it; in both cases, preventing a measuring instrument from recording what is occurring does not prevent the occurrence. But the analogy is also misleading. Breaking the thermometer need have no further effect on the phenomenon being recorded; it simply adds to our ignorance. Controlling prices, insofar as it is successful, has very important effects. Prices are not only measuring instruments, they also play a vital role in the economic process itself.

A much closer analogy is a steam-heating furnace running full blast. Controlling the heat in one room by closing the radiators in that room simply makes other rooms still more overheated. Closing all radiators lets the pressure build up in the boiler and increases the danger that it will explode. Closing or opening individual radiators is a good way to adjust the relative amount of heat in different rooms; it is not a good way to correct for over-fueling the furnace. Similarly, changes in individual prices are a good way to adjust to changes in the supply or demand of individual products; preventing individual prices from rising is not a good way to correct for a general tendency of prices to rise.

Suppose that there is such a general tendency, and suppose that some specific price (or set of prices), say, the price of steel, is prevented from rising. Holding down the price of steel does not make more steel available; on the contrary, given that other prices and costs are rising, it reduces the amount that producers can afford to spend in producing steel and is therefore likely to reduce the amount available from current production. Holding down the
price of steel does not discourage buyers; on the contrary, it encourages consumption. If the suppressed price is effectively enforced and not evaded by any of the many channels that are available to ingenious sellers and buyers some potential buyers of steel must be frustrated—there is a rationing problem. Chance, favoritism, or bribery will have to decide which buyers succeed in getting the steel. Those who succeed pay less than they are willing to pay. They, instead of the steel producers, have the remainder to spend elsewhere. Those who fail will try to substitute other metals or products and so will divert their demand elsewhere; the excess pressure is shifted, not eliminated.

The situation is precisely the same on the labor market. If wages are tending to rise, suppressing a specific wage rise will mean that fewer workers are available for that type of employment and more are demanded. Again rationing is necessary. The workers employed have less income to spend, but this is just balanced by their employers having larger incomes. And the unsatisfied excess demand for labor is diverted to other workers.

But, it will be said, I have begged the question by starting with a general tendency for prices to rise. Can it not be that this general tendency is itself produced by rises in a limited number of prices and wages which in turn produce sympathetic rises in other prices and wages? In such a case, may not preventing the initial price and wage rises nip a wage-price or price-price spiral in the bud?

Despite its popularity, this cost-push theory of inflation has very limited applicability. Unless the cost-push produces a monetary expansion that would otherwise not have occurred, its effect will be limited to at most a temporary general price rise, accompanied by unemployment, and followed by a tendency toward declining prices elsewhere.

Suppose, for example, a strong (or stronger) cartel were formed in steel, and that it decided to raise the price well above the level that otherwise would have prevailed. The price rise would reduce the amount of steel people want to buy. Potential purchasers of steel would shift to substitute products, and no doubt the prices of such substitutes would tend to rise in sympathy. But there is now another effect. Steel producers would hire fewer workers and
other resources. These would seek employment elsewhere, tending to drive down wages and prices in other industries. True, wages and prices might be sticky and decline only slowly, but that would only delay the downward adjustments and only at the expense of unemployment.³

A textbook example is provided by John L. Lewis and the United Mine Workers. Coal mining hourly earnings rose by “163 per cent from 1945 to 1960. Bituminous coal mining employment dropped from 284,000 to 168,000. By way of comparison, in the same period, manufacturing production hourly earnings rose … 122 per cent and manufacturing employment rose.”⁴ High coal prices undoubtedly put upward pressure on the prices of oil and gas; but the high unemployment put downward pressure on other prices.

The only example I know of in United States history when such a cost-push was important even temporarily for any substantial part of the economy was from 1933 to 1937, when the NIRA, AAA, Wagner Labor Act, and associated growth of union strength unquestionably led to increasing market power of both industry and labor and thereby produced upward pressure on a wide range of wages and prices. This cost-push did not account for the concomitant rapid growth in nominal income at the average rate of 14 per cent a year from 1933 to 1937. That reflected rather a rise in the quantity of money at the rate of 11 per cent a year. And the wage and cost-push had nothing to do with the rapid rise in the quantity of money. That reflected rather the flood of gold, initiated by the change in the United States price of gold in 1933 and 1934 and sustained by the reaction to Hitler’s assumption of power in Germany.

The cost-push does explain why so large a part of the growth in nominal income was absorbed by prices. Despite unprecedented levels of unemployed resources, wholesale prices rose nearly 50 per cent from 1933 to 1937, and the cost of living rose by 13 per cent. Similarly, the wage cost-push helps to explain why unemployment was still so high in 1937, when monetary restriction was followed by another severe contraction.
The popularity of the cost-push theory of inflation, despite its limited applicability, stems I believe from two sources: first, the deceptiveness of appearances; second, the desire of governmental authorities to shift the blame for inflation.

One of the fascinating features of economic relations is the frequent contrast between what is true for the individual and what is true for the community. Time and again the one is precisely the opposite of the other. Each individual takes for granted the prices of the things he buys and regards himself as having no effect en them; yet, consumers as a whole greatly affect those prices by the combined effects of their separate actions. Each individual can determine the amount of currency he carries around in his pocket; yet, all individuals together may have nothing to say about the total amount of currency to be carried around; that may be determined by monetary authorities, the individuals being free only to shuffle it around and transfer it from one to the other. Indeed, it is precisely this contrast between what is true for the individual and for the community that underlies many, perhaps most, common economic fallacies. They arise from invalid generalization from the individual to the community.

The widespread belief in the cost-push theory of inflation is a striking example. To each businessman separately, inflation tends to come in the form of increasing costs, and, typically, he correctly regards himself as having to raise the price at which he sells because his costs have risen. Yet, those cost rises may themselves reflect an increase in demand elsewhere and simply be part of the process whereby the demand increase is transmitted; and his ability to raise his price without a drastic decline in sales reflects the existence of excess demand. The monetary expansion and the associated increase in money demand take place through mysterious, widely dispersed, and largely invisible channels. The cost and price increases are their visible tracks.

In a recent elementary economics textbook, Alchian and Allen have given a vivid illustration of how a price rise produced by a demand increase can make itself felt to almost all the participants in the process as a cost-push:

Pretend that for some reason people’s desire for meat increases … Housewives reveal an increased demand by buying more meat than formerly
at the current prices in the meat markets … [T]he increased demand takes its
toll of inventories … [T]he butcher will buy more meat than usual the next
day in order to restore his inventory from its abnormally low level … Just as
butchers use inventories, so packers … also rely on inventories … [A]sume
that the first day’s change in demand was within that inventory limit and
therefore was met without a price increase.

   Packers restore inventories by instructing their cattle buyers … to buy more
cattle than usual. But with all the packers restoring their inventories in this
manner, the number of cattle available for sale each day are inadequate to
meet the increased to demand at the old price …

   [T]he buyers will begin to raise their offers … until the price rises to the
point where the packers will not want to buy more meat … than is available
from the cattlemen …

   [T]he packers experience a rise in costs … [so] the packers must charge a
higher price to butchers if they are to continue as profitable meat packers. …
The butchers, in turn, post higher prices to the housewives. When housewives
complain about the higher price, the butcher in all innocence, honesty, and
correctness says that it isn’t his fault. The cost of meat has gone up. … And
the packers can honestly say the same thing.5

To almost all participants, therefore, a rise in price produced by excess demand appears to
take the form of a rise in costs that enforces a higher price.

   The interpretation of inflation as a reflection of cost-push is greatly fostered by
governmental authorities. In modern times, the government has direct responsibility for the
creation and destruction of money; it determines what happens to the quantity of money.
Since inflation results from unduly rapid monetary expansion, the government is responsible
for any inflation that occurs.6 Yet, governmental authorities, like the rest of us, while only too
eager to take credit for the good things that occur, are most reluctant to take the blame for the
bad things—and inflation generally is regarded as a bad thing. Their natural tendency is to
blame others for the inflation that governmental policies produce—to castigate the rapacious
businessman and power-hungry labor leader rather than point to the government printing
press as the culprit.

   The 1966 Annual Report of the Council of Economic Advisers is an amusing and
distressing example. It has a 31-page chapter on “Prospects for Cost-Price Stability” that so
far as I have been able to determine has only two passing references to “monetary policy” and
does not even contain the word “money”—a treatment of money strictly comparable to the
way a rigid Puritan writing a book about love might have handled “sex.” In the page and a
half section on “Determination of the Price Level,” there is no mention of the government’s role until the last of eight paragraphs where the main emphasis is on the government’s role as a customer and on governmental measures that directly affect costs. The one sentence in this section on the government’s role in affecting aggregate demand is simply: “Fiscal policies help determine the over-all size of markets” (p. 65). Similarly, in the Council’s explicit discussion of monetary policy elsewhere in the report (pp. 44–52), there is no reference at all to inflation or price level, although there is a passing reference to “spending.” The careful reader of this 186-page report will have to wait until page 176, in a historical chapter on experience under the Employment Act, to find the first explicit recognition that there is any relation between monetary policy and inflation!

II. Inflation Is a Monetary Phenomenon

Yet, the central fact is that inflation is always and everywhere a monetary phenomenon. Historically, substantial changes in prices have always occurred together with substantial changes in the quantity of money relative to output. I know of no exception to this generalization, no occasion in the United States or elsewhere when prices have risen substantially without a substantial rise in the quantity of money relative to output or when the quantity of money has risen substantially relative to output without a substantial rise in prices. And there are numerous confirming examples. Indeed, I doubt that there is any other empirical generalization in economics for which there is as much organized evidence covering so wide a range of space and time.

Some confirming examples are extremely dramatic and illustrate vividly how important the quantity of money is by comparison with everything else. After the Russian Revolution of 1917, there was a hyperinflation in Russia when a new currency was introduced and printed in large quantities. Ultimately, it became almost valueless. All the time, some currency was circulating which had been issued by the prerevolutionary Czarist government. The Czarist government was out of power. Nobody expected it to return to power. Yet, the value of the Czarist currency remained roughly constant in terms of goods and rose sharply in terms of the
Bolshevik currency. Why? Because there was nobody to print any more of it. It was fixed in quantity and therefore it retained its value. Another story has to do with the United States Civil War. Toward the end of the war, the Union troops overran the place where the Confederates had been printing paper money to finance the war. In the course of moving to a new location, there was a temporary cessation of the printing of money. As a result, there was also a temporary interruption in the price rise that had been proceeding merrily.

The fact that inflation results from changes in the quantity of money relative to output does not mean that there is a precise, rigid, mechanical relationship between the quantity of money and prices, which is why the weasel-word “substantial” was sprinkled in my initial statement of the proposition. First, over short periods, the rate of change in the quantity of money can differ and sometimes by appreciable amounts from the rate of change in nominal income or prices because of other factors, including fiscal policy. Second, and more important, changes in the quantity of money do not make their effects felt immediately. It may be six months or a year or a year and a half before a change in the quantity of money appreciably affects nominal income or prices. Failure to allow for this difference in timing is a major reason for the misinterpretation of monetary experience. Third, and most important of all, there is a systematic and regular difference between changes in money and in prices in the course of an inflationary episode that is itself part of the very process by which monetary changes produce changes in prices.

The typical life history of an inflation is that the quantity of money per unit of output initially increases more rapidly than prices. During this period, the public does not anticipate price rises, interprets any price rise that occurs as temporary, and hence is willing to hold money balances of increased “real” value (i.e., corresponding to a larger volume of goods and services) in the belief that prices will be lower in the future. If the quantity of money continues to increase faster than output, however, prices will continue to rise, and sooner or later the public will come to anticipate further price rises. It then wishes to reduce its money balances not only to their former real value but to an even smaller level. Cash has now
become a costly way to hold assets, since its purchasing power is decreasing. People therefore try to reduce their cash balances. They cannot, as a whole, do so in nominal terms (i.e., in terms of dollars), because someone or other must hold the amount in existence. But the attempt to do so bids up prices, wages, and nominal incomes. The result is to reduce “real” balances. During this stage, therefore, prices rise more rapidly than the quantity of money, and sometimes much more rapidly. If the rate of rise of the quantity of money stabilizes, no matter at how high a level, the rate of price rise will ultimately settle down also. The total price rise may bear very different relations to the rise in the quantity of money per unit of output depending on the size of the monetary expansion. In moderate inflations, as for example the rise in prices in the United States by a third from 1896 to 1913, prices and money may rise by about the same percentage. In really substantial inflations, such as have occurred in recent decades in many South American countries, the price rise will generally be several times the monetary rise; in hyperinflations, the price rise will be many times the monetary rise.

The United States today is in the early stages of such an episode. From 1961 to 1965, the quantity of money per unit of output rose more rapidly than prices—the typical initial reaction. From early 1965 to early this year, the monetary rise has been accelerated, and the price rise has accelerated even more rapidly as anticipations of inflation have become widespread. As of now, if the rate of monetary growth were stabilized at the high level attained in 1965, the rate of price rise would continue to accelerate for a time. Even if the rate of monetary growth were sharply reduced, prices would continue to rise for a time under the combined influence of earlier monetary growth and changing anticipations.

Why should money be so critical a factor in price level behavior? Why should it occupy such a central role in the process? The key to an answer is the difference, already referred to, between the nominal quantity of money, the quantity of money expressed in terms of dollars, and the real quantity of money, the quantity of money expressed in terms of the goods and services it will buy or the number of weeks of income it is equal to.
People seem to be extraordinarily stubborn about the real amount of money that they want to hold and are unwilling to hold a different amount, unless there is a strong incentive to do so. This is true over both time and space.

Let me illustrate with currency in circulation alone, which is more comparable among countries and over time than a broader definition of money, including deposits. In the United States, the amount of currency held by the non-banking public amounts to roughly four weeks’ income. I know that this result seems surprising. When I ask people separately whether they have as much as four weeks’ income in the form of currency, I have rarely had anyone say yes. Part of the explanation is that about one-fifth of the currency is held by businesses such as retail stores. The main explanation, I am sure, is that there are a small number of people who hold very large sums in this form while the rest of us hold more moderate amounts. In any event, that is what the figures show. The fascinating thing is that the corresponding number was not very different a century ago. In 1867 people on the average held about five weeks’ income in the form of currency, compared to today’s four weeks’ income. In the interim this number has gone as low as 2¼ weeks’ income in 1929, as high as 8½ weeks’ in 1946. That is a substantial range, it is true, but those are long periods spanning major changes in circumstance.

This range, moreover, contains the figures for most countries in the world. In Israel, the amount held is about the same as in the United States, a little over four weeks’ income; in Japan and Turkey, about five weeks’ income; in Greece and Yugoslavia, about six weeks’ income; in India, about seven weeks’ income. Again, these are not negligible differences; yet, they are small compared to the differences among the countries in wealth, economic structure, political forms, and cultural characteristics.

Even these relatively small differences over time and space can be largely explained by a few major factors, of which the prevalence of deposit banking is perhaps the single most important.
Given that people are so stubborn about the amount they hold in the form of money, let us suppose that, for whatever reasons, the amount of money in a community is higher than people want to hold at the level of prices then prevailing. It does not for our purposes matter why, whether because the government has printed money to finance expenditures or because somebody has discovered a new gold mine or because banks have discovered how to create deposits. For whatever reason, people find that although on the average they would like to hold, let us say, the four weeks’ income that they hold in the United States, they are actually holding, say, five weeks’ income. What will happen? Here again it is essential to distinguish between the individual and the community. Each individual separately thinks he can get rid of his money and he is right. He can go out and spend it and thereby reduce his cash balances. But for the community as a whole the belief that cash balances can be reduced is an optical illusion. The only way I can reduce my cash balances in nominal terms is to induce somebody else to increase his. One man’s expenditures are another man’s receipts. People as a whole cannot spend more than they as a whole receive. In consequence, if everybody in the community tries to reduce the nominal amount of his cash balances, on the average nobody will do so. The amount of nominal balances is fixed by the nominal quantity of money in existence and no game of musical chairs can change it.

But people can and will try to reduce their cash balances and the process of trying has important effects. In the process of trying to spend more than they are receiving, people bid up the prices of all sorts of goods and services. Nominal incomes rise and real cash balances are indeed reduced, even though nominal balances, the number of dollars, are not affected. The rise in prices and incomes will bring cash balances from five weeks’ income to four weeks’ income. People will succeed in achieving their objective, but by raising prices and incomes rather than by reducing nominal balances. In the process, prices will have risen by about a fifth. This in a nutshell and somewhat oversimplified is the process whereby changes in the stock of money exert their influence on the price level. It is oversimplified because
there is a tendency to overshoot, followed by successive readjustments converging on the final position, but this complication does not affect the essence of the adjustment process.

Emphasis on the key role of the quantity of money leaves open the question of what produced the changes in the quantity of money. Hence, if an analysis of inflation is to deal not only with the change in the quantity of money but with what brought it about, it will be a very pluralistic theory. Historically, the actual sources of monetary expansion have been very different at different times and in different places.

In United States history, the most dramatic inflations have been wartime inflations—those associated with the Revolution, when prices skyrocketed and the declining value of the money produced the phrase “not worth a continental,” and with the War of 1812, the Civil War, and the two world wars, in all of which prices roughly doubled. In these episodes, the increase in the quantity of money was produced mainly by the printing of money to pay for governmental wartime expenses.

But even these episodes are not wholly to be explained in that fashion. In the final year of the World War I inflation (1919–20), when prices rose at their most rapid pace, the government budget was in surplus, and the rapid increase in the quantity of money was being produced for private, not governmental, purposes.

The two main periods of peacetime inflation in the United States were in the 1850’s and from 1896 to 1913. Both were parts of worldwide movements. The first resulted from the gold discoveries in California, the second from the development of a commercially feasible cyanide process for extracting gold from low-grade ore plus gold discoveries.

There is a widespread belief that inflation is somehow related to government deficits. This belief has a sound basis. The existence of deficits tempts governments to finance them by printing money (or the equivalent, creating deposits), hence deficits have often been the source of monetary expansion. But deficits per se are not necessarily a source of inflation. As already noted, the federal budget ran a surplus during 1919–20 when prices rose rapidly; similarly, there were extremely large surpluses immediately after World War II, when prices
also rose rapidly. On the other side, the budget was in deficit during 1931–33, when prices fell sharply. Deficits can contribute to inflation by raising interest rates and so velocity; for the rest they are a source of inflation if and only if they are financed by printing money.

The same considerations apply to other alleged sources of inflation. Increasingly strong trade unions can be a source of inflation if by their actions they produce unemployment and if a government committed to full employment expands the quantity of money as part of a policy of eliminating unemployment. This particular chain of events has often been alleged but, as already noted, seldom observed in the United States. More generally, a full employment policy can be a source of inflation if it produces undue monetary expansion.

III. Suppressed Inflation Is Worse than Open Inflation

The distinction between inflation and deflation, important as it is, is less important than the distinction between open inflation, one in which prices are free to rise without governmental price controls, and suppressed inflation, one in which the government attempts to suppress the manifestations of the inflationary pressure by controlling prices, including prices not only of products but also of factor services (i.e., wage rates, rents, interest rates) and of foreign currencies (i.e., exchange rates).

Open inflation is harmful. It generally produces undesirable transfers of income and wealth, weakens the social fabric, and may distort the pattern of output. But if moderate, and especially if steady, it tends to become anticipated and its worst effects on the distribution of income are offset. It still does harm, but, so long as prices are free to move, the extremely flexible private enterprise system will adapt to it, take it in stride, and continue to operate efficiently. The main dangers from open inflation are twofold: first, the temptation to step up the rate of inflation as the economy adapts itself; second, and even more serious, the temptation to attempt cures, especially suppression, that are worse than the disease.

Suppressed inflation is a very different thing. Even a moderate inflation, if effectively suppressed over a wide range, can do untold damage to the economic system, require
widespread government intervention into the details of economic activity, destroy a free enterprise system, and along with it, political freedom. The reason is that suppression prevents the price system from working. The government is driven to try to provide a substitute that is extremely inefficient. The usual outcome, pending a complete monetary reform, is an uneasy compromise between official tolerance of evasion of price controls and a collectivist economy. The greater the ingenuity of private individuals in evading the price controls and the greater the tolerance of officials in blinking at such evasions, the less the harm that is done; the more law-abiding the citizens, and the more rigid and effective the governmental enforcement machinery, the greater the harm.

A dramatic illustration of the difference between open and suppressed inflation is the contrast between the experience of Germany after World War I and after World War II. This happens to be one of those beautiful examples that history turns up for us from time to time in which experience is almost in the nature of a controlled experiment, because the difference in the character of the monetary phenomena is so great compared to differences in other relevant respects. After World War I, Germany had an open inflation of extremely large magnitude. It is difficult for us to contemplate the kind of inflation Germany experienced at that time because it is so extreme. A student of mine, Phillip Cagan, wrote a doctoral dissertation on hyperinflation in different countries, which has become something of a classic. He had the problem of how to define hyperinflation. He defined it as beginning when prices started to rise at the rate of more than 50 per cent a month. In the German hyperinflation after World War I, there were periods when prices rose not 50 per cent a month but doubled every week and some occasions on which they were doubling every day. Indeed, it got to the point that firms started to pay their employees their wages three times a day—after breakfast, lunch, and dinner, so that they could go out and spend them before they lost their value. That was really a whopping inflation, yet it went on for something like three years.

The inflation did untold harm to Germany. The impoverishment of the middle classes, the arbitrary redistribution of income, and the frantic instability unquestionably helped to lay the
groundwork for Hitler’s emergence later. Looked at, however, from the purely technical point of view of its effect on production, the astounding thing is that until the last six months of the inflation, total output in Germany never declined. Indeed, Germany was one of the few countries in the world that did not experience a great depression in 1920-21, when prices in the gold standard part of the world dropped by 50 per cent. Total output remained up. Why? Because the inflation was open. Prices were allowed to rise freely and hence the price system could still be used to allocate resources. Of course, after a time people started to use all sorts of escalation devices to link their contracts to the value of the mark in the foreign exchange market, which was also a free market price, and so on. The price system, however, could work even under those handicaps.

After World War II, Germany was under inflationary pressure as a result of an increase in the quantity of money during the war and the fixation of prices. By our usual standards, the pressure was substantial. If prices had been allowed to rise freely immediately after the war, the price level would probably have quadrupled. That is a large price rise. But it is negligible by comparison with the price rise after World War I which has to be described in terms of factors like $10^{10}$. The price rise after World War II, however, was suppressed. Ordinarily, it is extremely difficult to suppress a price rise of that magnitude, to enforce price control when the market price would be four times the controlled price. But there were certain especially favorable circumstances from the point of view of enforcing price control in Germany at that time. Germany was occupied by the armed forces of Britain, France, and the United States, and the occupation forces enforced price control.

The result of suppressing inflation was that output in Germany was cut in half. The price system was not allowed to function. People were forced to revert to barter. Walter Eucken in an article describing this period tells the story of people who worked in a factory making pots and pans. They would work there for two or three days and then they would be given their pay in the form of aluminum saucepans. They would take the saucepans and spend the rest of the week scouring the countryside trying to find some farmer who would be willing to trade a
few potatoes or other produce for the saucepans. That is not a very efficient way to organize resources. It was so inefficient that something had to be done and something was done. People developed their own forms of money. Cigarettes came into use as money for small transactions and cognac for large transactions—the most liquid money I have ever come across. But even with these expedients, suppressed inflation cut output in half from the level at the immediate end of the war.

In 1948 as you know, the so-called German miracle began. It was not a very complicated thing. It amounted to introducing a monetary reform, eliminating price control, and allowing the price system to function. The extraordinary rise in German output in the few years following this reform was not owing to any miracle of German ingenuity or ability or anything like that. It was the simple, natural result of allowing the most efficient technique people have ever found for organizing resources to work instead of preventing it from working by trying to fix prices here, there, and everywhere.

Although this is the most dramatic example, numerous other examples can be cited of a less extreme kind. In the immediate postwar period, I visited Europe and spent some time in Britain and France. Both countries at that time had widespread price controls. But there was an important difference. The people of Britain were relatively law-abiding, the people of France were not. The result was that Britain was being strangled by the law obedience of her people and France was being saved by the black market.

The reason suppressed inflation is so disastrous, as these examples suggest, is that the price system is the only technique that has so far been discovered or invented for efficiently allocating resources. If that is prevented from operating, something else must be substituted. What do we substitute? It is always some kind of clumsy physical control.

A striking current example is provided by India with its system of exchange control and import licenses. In the past decade, India has experienced a price rise of something between 25 and 50 per cent. In the main, this price rise has been open, although there have been some price controls. There has been, however, one important glaring exception—the price of
foreign exchange. The official price of the dollar or the pound sterling in terms of the rupee is precisely the same today as it was ten years ago. If the price of the rupee was anywhere close to being right then, it cannot be right now. And of course it is not right. The effect has been to encourage people to try to import goods because they are artificially cheap and to discourage them from trying to export goods because the amount of rupees they can get for the foreign exchange proceeds of exports will buy less at home than before. Imports and exports are highly sensitive areas. Even moderate changes can have very large effects. The result has been a serious foreign exchange crisis. India at first allowed her foreign exchange reserves to run down until today reserves are very small. In addition, direct controls over imports have been increasingly tightened and all sorts of special measures have been taken to subsidize and encourage exports. Certain categories of imports have been banned entirely. For other categories, import licenses have been given on a more and more limited scale. And even so, the exchange rate has been able to be maintained only because of very large additional grants of foreign aid.

The result has been incredible waste and inefficiency, proliferating bureaucracy, and widespread corruption and bribery. In my opinion, the pegging of the exchange rate is the key to India’s economic failure. Setting it free, along with the wiping away of the mountains of regulations exchange control has engendered, is the most important single step that India could take to unleash its very real potentialities.

The experience of India could be duplicated manyfold. I cite it only because it happens to be the case with which I am most intimately familiar.

India is a far-off land. But the same process has been getting under way in the United States. As in India, the pegging of exchange rates is the most conspicuous example of the suppression of inflation in the United States, and it has been having the same effects. The changes in tourist allowances; the “voluntary” quotas imposed on the exports of foreign countries to us; the establishment of a cartel agreement among banks to limit foreign loans, an agreement that would be clearly illegal if privately entered into but that is urged in the name
of patriotism and is policed by the Federal Reserve System; the so-called voluntary foreign exchange program for business enterprises, administered by the Department of Commerce and constituting an extralegal exchange control arrangement—these are but a sample and a foretaste of what suppressed inflation implies.

A perhaps even more illuminating foretaste is furnished by the recent developments in connection with copper, which combine internal price restraint with control of exchange rates. The posted American producer price of blister copper is being kept, by pressure from Washington, at about 36 cents a pound, well below the world price. The result, of course, is that it is profitable to export copper. Accordingly, the export of copper without a license has been prohibited and full-fledged governmental export control of copper has been introduced. Needless to say, not even the government can live with such a price discrepancy when the United States must import copper. The United States government has therefore made a deal with Chile involving Chile’s selling us copper at 36 cents a pound in return for our giving them a development loan of $10 million at highly favorable terms. A bit of quick arithmetic yields a gross price of copper, including the value to Chile of the soft loan, of between 40.6 and 41.6 cents a pound, or almost precisely Chile’s current export price of 42 cents a pound. Such shenanigans to conceal the United States government’s evasions of its own guidelines would be as humorous as they are ludicrous if the episode were not such a disheartening harbinger of what currently looks like the wave of the future. Again, in a futile effort to hold down the price of copper, the United States government sold 200 million tons of copper from its stockpile at the price of 36 cents a pound it has been trying to peg. Since the market price of scrap plus the cost of converting it was at the time about 50 cents a pound, this amounted to splitting the melon of $56 million with the users of copper lucky enough to buy from the government at the fixed price.

The United States had widespread experience with the results of price and wage controls during World War II, and New York City’s housing difficulties are a current reminder of their long-reaching effects, since New York is the only city in the land that still has rent controls as
a heritage of the war. The memory of this experience leads government officials to disavow any intention of imposing explicit price and wage controls. But voluntary controls are no improvement, except as they are more readily evaded. Let them be abided by, and the consequences will be the same.

IV. What Harm Will Be Done by the Guideposts?

Even granted that legally imposed and vigorously enforced wage and price ceilings covering a wide range of the economy would do enormous harm, some may argue that the enunciation of guideposts, their approval by businessmen and labor leaders, and voluntary compliance with them, or even lip service to them, is a palliative that can do no harm and can temporarily help until more effective measures are taken. At the very least, it may be said, it will enable businessmen and labor leaders to display their sense of social responsibility.

This view seems to me mistaken. The guideposts do harm even when only lip service is paid to them, and the more extensive the compliance, the greater the harm.

In the first place, the guideposts confuse the issue and make correct policy less likely. If there is inflation or inflationary pressure, the governmental monetary (or, some would say, fiscal) authorities are responsible. It is they who must take corrective measures if the inflation is to be stopped. Naturally, the authorities want to shift the blame, so they castigate the rapacious businessman and the selfish labor leader. By approving guidelines, the businessman and the labor leader implicitly whitewash the government for its role and plead guilty to the charge. They thereby encourage the government to postpone taking the corrective measures that alone can succeed.

In the second place, whatever measure of actual compliance there is introduces just that much distortion into the allocation of resources and the distribution of output. To whatever extent the price system is displaced, some other system of organizing resources and rationing output must be adopted. As in the example of the controls on foreign loans by banks, one adverse effect is to foster private collusive arrangements, so that a measure undertaken to
keep prices down leads to government support and encouragement of private monopolistic arrangements.

In the third place, “voluntary” controls invite the use of extralegal powers to produce compliance. And, in the modern world, such powers are ample. There is hardly a business concern that could not have great costs imposed on it by antitrust investigations, tax inquiries, government boycott, or rigid enforcement of any of a myriad of laws, or on the other side of the ledger, that can see no potential benefits from government orders, guarantees of loans, or similar measures. Which of us as an individual could not be, at the very least, seriously inconvenience by investigation of his income tax returns, no matter how faithfully and carefully prepared, or by the enforcement to the letter of laws we may not even know about? This threat casts a shadow well beyond any particular instance. In a dissenting opinion in a recent court case involving a “stand-in” in a public library, Justice Black wrote, “It should be remembered that if one group can take over libraries for one cause, other groups will assert the right to do it for causes which, while wholly legal, may not be so appealing to this court.” Precisely the same point applies here. If legal powers granted for other purposes can today be used for the “good” purpose of holding down prices, tomorrow they can be used for other purposes that will seem equally “good” to the men in power—such as simply keeping themselves in power. It is notable how sharp has been the decline in the number of businessmen willing to be quoted by name when they make adverse comments on government.

In the fourth place, compliance with voluntary controls imposes a severe conflict of responsibilities on businessmen and labor leaders. The corporate official is an agent of his stockholders; the labor leader, of the members of his union. He has a responsibility to promote their interests. He is now told that he must sacrifice their interests to some supposedly higher social responsibility. Even supposing that he can know what “social responsibility” demands—say by simply accepting on that question the gospel according to the Council of Economic Advisers—to what extent is it proper for him to do so? If he is to
become a civil servant in fact, will he long remain an employee of the stockholders or an agent of the workers in name? Will they not discharge him? Or, alternatively, will not the government exert authority over him in name as in fact?

V. Conclusion

Inflation being always and everywhere a monetary phenomenon, the responsibility for controlling it is governmental. Legally enforced price and wage ceilings do not eliminate inflationary pressure. At most they suppress it. And suppressed inflation is vastly more harmful than open inflation.

Guideposts and pleas for voluntary compliance are a halfway house whose only merit is that they can more readily be abandoned than legally imposed controls. They are not an alternative to other effective measures to stem inflation, but at most a smoke-screen to conceal the lack of action. Even if not complied with they do harm, and the more faithfully they are complied with, the more harm they do.

Nonetheless, we should not exaggerate either the problem or the harm that will be done by false cures. Prices will almost surely rise in coming months. We shall probably continue to experience inflationary pressure on the average over the coming years. The price rise, however, will be moderate. A major war aside, I cannot conceive that the monetary authorities will permit the quantity of money to rise at a rate that would produce inflation of more than, say, 3-to-10 per cent a year. Such inflation will be unfortunate, but if permitted to occur reasonably openly and freely, not disastrous. And, despite all the talk, prices and wages will be permitted to rise in one way or another. The guideposts will be more talked about than they will be voluntarily complied with or enforced by extralegal pressure. Hypocrisy will enable effective evasion to be combined with self-congratulation. Debasing the coin of public and private morality is unfortunate, but in moderate doses not disastrous. The greatest harm will continue to be done by the measures taken to peg exchange rates. It is well to keep in mind Adam Smith’s famous comment, “There is much ruin in a nation,” but only to avoid overstating a good case, not to condone bad policy.
Notes


1 In a market economy, prices of particular goods and services, including labor services, are always changing relatively to one another, some rising, others falling, some rising rapidly, others slowly, and so on. When rises predominate, in some sense which allows for the relative importance of the items whose prices are considered, there is inflation; when declines predominate, there is deflation. This definition is purposely vague because there is no unique way to measure the “average” behavior of prices; different indexes often give different answers not only about the size of any price change, but even about its direction. These differences are sometimes very large and are important for many purposes. In the context of this paper, however, they are not. We shall restrict attention to cases in which the general tendency for prices to rise is so clear and widespread that it would be reflected in just about every broadly based index number.

2 As Robert Solow pointed out in his comments on this paper at the conference, the argument of the other sections of this paper (sections I, III, and IV) is almost entirely independent of my generalization about the central role of the quantity of money in the inflationary process. The words inflationary pressure can be interpreted to mean an aggregate nominal demand in excess of the value of prior (or potential) output at prior prices. Whether this excess nominal demand reflects a change in the quantity of money, as I believe it generally does, or a change in velocity produced, for example, by changes in fiscal policy or investment demand, as others may believe, the analysis of the effects of price and wage guidelines or controls is precisely the same.

I am indebted to Mr. Solow for making this point explicit at the conference
Note that even for such a temporary effect, it is not enough that there exist monopolies of business and labor; it is necessary that monopoly power increase; otherwise, relative prices will already have become adjusted.


To repeat in a specific context the point made earlier, note that precisely the same argument would hold if, as many believe, it is fiscal policy rather than monetary policy that accounts for the excess demand.

The word money is used in at least three different senses: (1) as in “money balances” when the reference is to the pieces of paper we carry in our pocket or the credits to our account on the books of banks—this is the sense in which I shall use it; (2) as in “making money” when the reference is not to a counterfeiter but to a recipient of income; and (3) as in “money markets” when the reference is to “loans” or “credit,” paper claims that cover a vastly broader range of instruments than those we designate “money” in the first sense. Confusion among these meanings underlies much misunderstanding about the role of money in economic affairs. In particular, confusion between the first and third has led to great overemphasis on the “credit” effects of governmental monetary policy rather than the effects on the quantity of money. Hence, the statement that inflation is a monetary phenomenon is sometimes interpreted not as I do in the text but as indicating that inflation reflects changes in credit markets.


I am indebted to David Kleinman for calling this episode to my attention and for the calculations referred to. Since this was written, Chile has raised her export price sharply.