“Monetary Correction: A Proposal for Escalator Clauses to Reduce the Costs of Ending Inflation”
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Synopsis

There is no technical problem about how to end inflation (Section I). The real obstacles are political, not technical.

Ending inflation would deprive government of revenue it now obtains without legislation (Section II). Replacing this revenue will require government to reduce expenditures, raise explicit taxes, or borrow additional sums from the public—all politically unattractive. I do not know any way to avoid this obstacle.

Political obstacles to ending inflation

Ending inflation would also have the side-effect of producing a temporary, though perhaps fairly protracted, period of economic recession or slowdown and of relatively high unemployment. The political will is today lacking to accept that side-effect. Experience suggests that its occurrence would instead produce an over-reaction involving accelerated government spending and monetary growth that in its turn would produce the initial side-effect of an unsustainable boom followed by accelerated inflation. These side-effects of changes in the rate of inflation arise because of the time it takes for the community to adjust itself to changed rates of growth of spending. The time-delay distorts relative prices, the structure of production and the level of employment. In turn, it takes time to correct these distortions (Section III).

The side-effects of changes in the rate of inflation can be substantially reduced by encouraging the widespread use of price escalator clauses in private and governmental contracts. Such arrangements involve deliberately eschewing some of the advantages of the use of money and hence are not good in and of themselves. They are simply a lesser evil than a badly-managed money. The widespread use of escalator clauses would not by itself either increase or decrease the rate of inflation. But it would reduce the revenue that government acquires from inflation—which also means that government would have less incentive to inflate. More important, it would reduce the initial adverse side-effects on output and employment of effective measures to end inflation (Section IV).

Legal enforcement

The use of escalator clauses in government contracts—taxation, borrowing, hiring, purchasing—should be required by law. Their use in private contracts should be permitted and enforceable at law but should be voluntary. The two are related because government adoption of escalator clauses, particularly in taxes, would remove serious impediments to their private adoption (Section V).
Objections to widespread escalation mostly reflect misconceptions about its effects. These misconceptions reflect the same confusion between relative prices and absolute prices that is responsible for many of the adverse effects of accelerated inflation or deflation and for misconceptions about the cause and cure of inflation (Section VI).

I

THE TECHNICAL CAUSE AND CURE OF INFLATION

Short-run changes in both particular prices and in the general level of prices may have many sources. But long-continued inflation is always and everywhere a monetary phenomenon that arises from a more rapid expansion in the quantity of money than in total output—though I hasten to add that the exact rate of inflation is not precisely or mechanically linked to the exact rate of monetary growth. (The accompanying Chart (p. 11) plots consumer prices in Britain and the ratio of the quantity of money to output over the last decade.)

This statement is only a first step towards an understanding of the causes of any particular inflation. It must be completed by an explanation of the reason for the rapid monetary growth. The rapid monetary growth that produced inflation in the USA from 1848 to 1860 reflected gold discoveries in California. The rapid monetary growth that produced world inflation from 1890 to 1914 reflected the perfection of the cyanide process for extracting gold from low-grade ore. The rapid monetary growth that has time and again produced wartime inflation has reflected the use of the printing press or its equivalent to finance wartime government spending.
Under modern conditions, the quantity of money is determined by governmental monetary authorities. The accelerated increase in the quantity of money throughout the world in the past decade, which is responsible for the recent acceleration of inflation, has reflected a number of causes:

1. the attempt to maintain fixed exchange rates, which induced some countries, notably Germany and Japan, to ‘import’ inflation from the USA;

2. the expansion in the role of government, and the reluctance to impose explicit taxes, which has induced many governments to use the implicit tax of inflation;

3. the commitment of governments to a policy of full employment, which has led them to over-react to temporary recessions by measures leading to rapid monetary growth.

Long-continued inflation can be ended only by a reduction in the rate of monetary growth. But, again, this statement is only a first step. The measures that can be used to reduce the rate of monetary growth may vary widely depending on the sources of the excess growth and the institutions of the country in question. For example, if monetary growth has reflected the financing of government expenditures by the printing press, it can be ended by

(a) reducing government spending;

(b) raising taxes;

(c) financing the deficit in the government budget by borrowing from the public rather than by creating money.

But method (c) may not be available for a country that does not have well-developed security markets. And all hyper-inflations have reflected governments so impotent and disorganized as to be unable to employ (b).

**Importance—and limitations—of fiscal policy**

As these comments imply, fiscal policy may play an important role in producing and curing inflation. Its influence is primarily through its effect on the quantity of money. But its influence can be offset by other forces affecting the quantity of money. Large government surpluses in the USA in 1919 and 1920 did not prevent rapid inflation because they were accompanied by rapid monetary growth which financed private spending. Large government deficits in the USA in 1931 to 1933 did not produce rapid inflation or prevent severe deflation because they were accompanied by a sharp decline in the quantity of money which sharply reduced private spending.

What matters for inflation is not simply the rate of monetary growth but the rate of growth relative to the rate of growth of output, and, in a more sophisticated presentation, relative to the rate of growth in the demand for real money balances at a constant level (or rate of change) of prices. This relationship has led many commentators to emphasise the role of ‘productivity’, arguing that inflation reflects a decline in productivity (or its rate of growth) and that a cure
requires an increase in productivity (or its rate of growth). Though the role of output growth is, in principle, strictly symmetrical to the role of monetary growth, the quantitative orders of magnitude are wholly different. For any given country, over any period longer than a few years, the rate of output growth is unlikely to vary by more than a few percentage points—it would take a major structural change, for example, to raise the rate of growth of output in the USA by two percentage points, from, say, 3–4 per cent per year to 5–6 per cent. On the other hand, the rate of monetary growth can and does vary over a much wider range—it can easily go from 3 or 4 per cent per year to 20 per cent per year. As a matter of experience, therefore, long-continued inflation is dominated by monetary changes rather than by changes in output.

The importance of the simple proposition in this section is that no measures are likely to produce long-continued inflation or to cure long-continued inflation unless they affect the long-term rate of monetary growth.

II

GOVERNMENT REVENUE FROM INFLATION

Since time immemorial, the major source of inflation has been the sovereign’s attempt to acquire resources to wage war, to construct monuments, or for other purposes. Inflation has been irresistibly attractive to sovereigns because it is a hidden tax that at first appears painless or even pleasant, and, above all, because it is a tax that can be imposed without specific legislation. It is truly taxation without representation.

Three ways government gains from inflation

The revenue yield from inflation takes three major forms:

1. Additional government-created fiat money. Since ancient times, sovereigns have debased coinage by replacing silver or gold with base metals. Later, paper currency supplemented token coins. More recently still, book entries at Central Banks (misleadingly called deposits) have been added. Governments use the fiat money that they issue to finance expenditures or repay debt. In addition, the fiat money serves as a base on which the banking system creates additional money in the form of bank deposits.

   In the calendar year 1973 the US government realized $8,000 million (£3,300 million) from this source—$6,000 million (£2,500 million) additional currency and coin in circulation on 31 December, 1973 than on 31 December, 1972, and more than $2,000 million (£830 million) in additional deposits at Federal Reserve Banks.

2. Inflation increases the yield of the personal and corporate income tax by pushing individuals and corporations into higher income groups, generating artificial (paper) capital gains on which taxes must be paid, and rendering permitted depreciation allowances inadequate to replace capital, so taxing a return of capital to shareholders as if it were a return on capital. For the corporation tax alone, the US government realized in 1973 nearly $13,000 million (£5,420 million) from this source.
3. The reduction in the real amount of outstanding National Debt. Much of this debt was issued at yields that did not allow for current rates of inflation. On a conservative estimate, the US government realized in 1973 something like $5,000 million (£2,000 million) from this source.\footnote{5}

All told, the US government’s revenue from inflation totaled more than $25,000 million (£10,000 million) in 1973. Ending inflation would end this source of revenue. Government would have to reduce expenditures, increase explicit taxes, or borrow additional funds from the public at whatever interest rate would clear the market. None of these courses is politically attractive.

III

SIDE-EFFECTS ON OUTPUT AND EMPLOYMENT

Acute appendicitis is accompanied by a high fever; the removal of the appendix will require that the patient stay in bed for some days. But the fever is not the cause of the appendicitis and bed-rest is not the cure. Both are side-effects.

The analogy with inflation is striking. The boom that typically accompanies the onset of accelerated inflation is not the cause of the inflation but a side-effect; the recession and unemployment that typically accompany the reduction of inflation are not the cure but a side-effect. There are many ways to increase unemployment that would exacerbate inflation rather than cure it.

Time-lags lead to side-effects

Higher inflation reflects an acceleration in the growth rate of total money spending. Ending inflation requires a deceleration in the growth rate of total spending. The reason for the side-effects from such changes in total spending—both the boom which is generally regarded as a desirable side-effect and the recession which is uniformly regarded as an undesirable side-effect—is the time-delay between an increased or decreased rate of growth of total money spending and the full adjustment of output and prices to that changed rate of growth of total spending.

Essentially the same side-effects will arise whatever may be the cause of the changed growth rate in total spending—just as a high fever accompanies many different diseases and bed-rest many different cures. When non-monetary forces produce brief fluctuations in the rate of growth of total spending, the same side-effects occur. Also, if there is some cause other than unduly rapid monetary growth for long-continued inflation, or some cure other than reduced monetary growth, that cause and that cure will operate largely by affecting the growth rate in total money spending, and hence will produce much the same side-effects. Similarly, the measures proposed later to reduce the adverse side-effects of ending inflation will be effective whatever the cause and whatever the cure.

Hence the rest of this essay is relevant even if you do not accept my monetarist view as expressed in Section I.
Expectations slow to change

When total spending slows down, each producer separately tends to regard the reduction in the demand for his product as special to him, and to hope that it is temporary. He is inclined to meet it primarily by reducing output or accumulating stock, not by shading prices. Only after a time-lag will he start to shade prices. Similarly, any of his workers who are laid off are likely to react by waiting to be recalled or by seeking jobs elsewhere, not by moderating wage demands or expectations. A slowdown in total spending will therefore tend to be reflected initially in a widespread slowdown in output and employment and an increase in stocks. It will take some time before these responses lead in turn to widespread reductions in the rate of inflation and the rate of increase in wages. It will take still more time before expectations about inflation are revised and the revised expectations encourage a resumption of employment and output.

This is a highly simplified picture. Different activities have different time-speeds of adjustment. Some prices, wages and production schedules are fixed a long time in advance; others can be adjusted promptly. As a result, a slowdown of total spending produces substantial shifts in relative prices, which will sooner or later have to be corrected; the correction in turn will cause economic disturbances.

For the USA, study of monetary history\(^6\) indicates that the time-delay between a change in the rate of monetary growth and a corresponding change in the rate of growth of total spending and total output has averaged six to nine months; between the change in the rate of growth of spending and of prices, 12 to 18 months. Accordingly, the total delay between a change in monetary growth and in the rate of inflation has been about two years.\(^7\) For the UK, the available evidence indicates that the time-delay is roughly the same as for the USA.

Serious effects on lending

The time-delay and resultant distortion are particularly clear for loans, where the distinction between nominal and real is especially important. Suppose you lend someone £100 in return for a promise to pay you £110 a year later. Neglect any possibility of default. What interest rate have you received? In pounds, 10 per cent. But if prices have risen by 10 per cent during the year, the £110 will buy only as much as the £100 would have done a year earlier. Your real return is nil. Indeed, if, as is true today, the £10 nominal return is subject to income tax, your real return is negative. You end up with less than you started with.

If you entered into a mortgage some years back, you may have paid 5 or 6 percent. Given the inflation of the past few years, your effective real rate may have been nil. The rising price level probably raised the value of your property by as much as, or more than, the interest you paid. The lender in turn received a real return of nil—or a negative return if he was liable to tax. Similarly, consider someone who today takes out a mortgage at 11 per cent or more. Suppose economic policy were successful in bringing inflation down to nil. He would be in severe difficulties (unless of course the rate were reduced), and the lender would have received a wholly unexpected gain.

Failure of political will
Such side-effects constitute, I believe, the most important political obstacle to ending inflation, given, first, the commitment on the part of the US, UK and most other governments to ‘full employment’, secondly, the failure of the public at large to recognize the inevitable if temporary side-effects of ending inflation, and thirdly, the unwillingness or inability of political leaders to persuade the public to accept these side-effects.

Some years ago, when inflation was much lower than now, I believed that the re-adjustment required was sufficiently mild and brief to be politically feasible. But unfortunately in the USA the opportunity was cast aside on 15 August, 1971, when President Nixon reversed economic policy by imposing a price and wage freeze and encouraging expansive monetary and fiscal policy. At the time, we were well on the way to ending inflation without severe side-effects. At the cost of the mild 1970 recession, the annual rate of inflation had been reduced from over 6 per cent to 4.5 per cent and was still declining. The economy was slowly recovering from that recession. Had the nation had the will—for President Nixon was reflecting a widespread national consensus when he reversed policy—another year of continued monetary restraint and of slow expansion would probably have turned the trick. As it was, the 1970 recession was a masochistic exercise rather than a side-effect of a successful cure.

Inflation in the USA is currently (mid-1974) far worse than in August 1971. The 14 per cent rate in the first quarter of 1974 was doubtless a temporary bubble, but, even on the most optimistic view, inflation is not likely to fall below 6 per cent during the coming year. Starting from that level, and with inflationary expectations even more deeply entrenched, an effective policy to end inflation would entail as a side-effect a considerably more severe and protracted recession than we experienced in 1970. The political will to accept such a recession, without reversing policy and re-stimulating inflation, is simply not present.

What then? If we—and probably Britain and other countries similarly placed—do nothing, we shall suffer even higher rates of inflation—not continuously, but in spurts as we over-react to temporary recessions. Sooner or later, the public will get fed up, will demand effective action, and we shall then have a really severe recession.

IV

Easing the Side-effects

How can we make it politically feasible to end inflation much sooner? As I see it, inflation can be ended sooner only by adopting measures that will reduce the side-effects from ending it. These side-effects fundamentally reflect distortions introduced into relative prices by unanticipated inflation or deflation, distortions that arise because contracts are entered into in terms of nominal prices under mistaken perceptions about the likely course of inflation.

Escalator clauses: an illustration

The way to reduce these side-effects is to make contracts in real, not nominal, terms. This can be done by the widespread use of escalator clauses.

Let me illustrate. In 1967 General Motors and the United Automobile Workers Union reached a wage agreement for a three-year period. At the time, prices had been relatively stable, consumer
prices having risen at the average rate of 2.5 percent in the preceding three years. The wage agreement was presumably based on an expectation by both General Motors and the union that prices would continue to rise at 2.5 per cent or less. That expectation was not realized. From 1967 to 1970, prices rose at an average annual rate of 5.2 per cent. The result was that General Motors paid real wages that were increasingly lower than the levels both parties had expected. The unexpected fall in real wages was a stimulus to General Motors, and no doubt led it to produce at a higher rate than otherwise. Initially, the unexpected fall in real wages was no deterrent to workers, since it took some time before they recognized that the accelerated rise in consumer prices was more than a transitory phenomenon. But by 1970 they were certainly aware that their real wages were less than they had bargained for.

The result was a strike in late 1970, settled by a wage agreement that provided (1) a very large increase in the initial year; (2) much smaller increases for the next two years; and (3) a cost-of-living escalator clause.

The contract was widely characterized as ‘inflationary’. It was no such thing. The large initial year increase simply made up for the effect of the past unanticipated inflation. It restored real wages to the levels at which both parties had expected them to be. The escalator clause was designed to prevent a future similar distortion, and it has done so.

This General Motors example illustrates a side-effect of unanticipated inflation. Suppose the same contract had been reached in 1967 but that the rate of inflation, instead of accelerating, had declined from 2.5 per cent to nil. Real wages would then have risen above the level both parties had anticipated; General Motors would have been driven to reduce output and employment; the workers would have welcomed the unexpectedly high real wage-rate but would have deplored the lower employment; when contract renewal was due, the union, not General Motors, would have been in a weak bargaining position.

An escalator clause which works both up and down would have prevented both the actual side-effects from unanticipated inflation and the hypothetical side-effects from unanticipated deflation. It would have enabled employers and employees to bargain in terms of the conditions of their own industry without having also to guess what was going to happen to prices in general, because both General Motors and the union would have been protected against either more rapid inflation or less rapid inflation.

Useful though they are, widespread escalator clauses are not a panacea. It is impossible to escalate all contracts (consider, for example, paper currency), and costly to escalate many. A powerful advantage of using money is precisely the ability to carry on transactions cheaply and efficiently, and universal escalator clauses reduce this advantage. Far better to have no inflation and no escalator clauses. But that alternative is not currently available.

**Origins of the escalator: the ‘tabular standard’**

Let me note also that the widespread use of escalator clauses is not a new or untried idea. It dates back to at least 1707, when a Cambridge don, William Fleetwood, estimated the change in prices over a 600-year period in order to calculate comparable limits on outside income that college Fellows were permitted to receive. It was suggested explicitly in 1807 by an English writer on
money, John Wheatley. It was spelled out in considerable detail and recommended enthusiastically in 1886 by the great English economist, Alfred Marshall. The great American economist Irving Fisher not only favored the ‘tabular standard’—as the proposal for widespread indexation was labeled nearly two centuries ago—but also persuaded a manufacturing company that he helped to found to issue a purchasing-power security as long ago as 1925. Interest in the ‘tabular standard’ was the major factor accounting for the development of index numbers of prices. In recent years, the ‘tabular standard’ has been adopted by Brazil on a wider scale than I would recommend for the USA. It has been adopted on a smaller scale by Canada, Israel, and many other countries. 

V

THE SPECIFIC PROPOSAL

For the USA, my specific proposal has two parts, one for the Federal government, one for the rest of the economy. For the Federal government, I propose that escalator clauses be legislated; for the rest of the economy, that they be voluntary but that any legal obstacles be removed. The question of which index number to use in such escalator clauses is important but not critical. As Alfred Marshall said in 1886, ‘A perfectly exact measure of purchasing power is not only unattainable, but even unthinkable’. For the USA, as a matter of convenience, I would use the cost-of-living index number calculated by the Bureau of Labor Statistics.

(a) The Government

The US government has already adopted escalation for social security payments, retirement benefits to Federal employees, wages of many government employees, and perhaps some other items. Taxes which are expressed as fixed percentages of price or other value base are escalated automatically. The key additional requirement is for escalator clauses in the personal and corporate income tax and in government securities.

The personal tax. Minor details aside, four revisions are called for:

(i) The personal exemption, the standard deduction, and the low income allowance should be expressed not as a given number of dollars, but as a given number of dollars multiplied by the ratio of a price index for the year in question to the index for the base year in which ‘indexation’ starts. For example, if in the first year prices rise by 10 per cent, then the present amounts should be multiplied by 110/100 or 1.10.

(ii) The brackets in the tax tables should be adjusted similarly, so that, in the examples given, 0–$500 would become 0–$550, and so on.

(These two measures have been adopted by Canada.)

(iii) The base for calculating capital gains should be multiplied by the ratio of the price index in the year of sale to the price index in the year of purchase. This would prevent the taxing of non-existent, purely paper capital gains.
(iv) The base for calculating depreciation on fixed capital assets should be adjusted in the same way as the base for calculating capital gains.

The corporate tax

(i) The present $25,000 (£10,400) dividing line between normal tax and surtax should be replaced by that sum multiplied by a price index number.

(ii) The cost of stocks used in sales should be adjusted to eliminate book profits (or losses) resulting from changes in prices between initial purchase and final sale.

The base for calculating (iii) capital gains, and (iv) depreciation of fixed capital assets should be adjusted as for the personal tax.

Government securities. Except for short-term bills and notes, all government securities should be issued in purchasing-power form. (For example, Series E bonds should promise a redemption value equal to the product of the face value calculated at, say, 3 per cent per year and the ratio of the price index in the year of redemption to the price index in the year of purchase.) Coupon securities should carry coupons redeemable for the face amount multiplied by the relevant price ratio, and bear a maturity value equal to the face amount similarly multiplied by the relevant price ratio.

These changes in taxes and in borrowing would reduce both the incentive for government to resort to inflation and the side-effects of changes in the rate of inflation on the private economy. But they are called for also by elementary principles of ethics, justice, and representative government, which is why I propose making them permanent.

Taxation inflated to record levels

As a result largely of inflation produced by government in the USA, the UK and elsewhere, personal income taxes are today heavier than during the peak of Second World War financing, despite several ‘reductions’ in tax rates. Personal exemptions in real terms are at a record low level. The taxes levied on persons in different economic circumstances deviate widely from the taxes explicitly intended to apply to them. Government has been in the enviable position of imposing higher taxes while appearing to reduce taxes. The less enviable result has been a wholly arbitrary distribution of the higher taxes.

As for government borrowing, the savings bond campaigns of the US and UK Treasuries have been the largest bucket-shop operations ever engaged in. This is not a recent development. In responding to a questionnaire of the Joint Economic Committee of Congress, I wrote as early as 1951:

‘I strongly favor the issuance of a purchasing-power bond on two grounds: (a) It would provide a means for lower- and middle-income groups to protect their capital against the ravages of inflation. This group has almost no effective means of doing so now. It seems to me equitable and socially desirable that they should. (b) It would permit the Treasury to sell bonds without engaging in advertising and promotion that at best is highly misleading, at worst, close to being downright immoral. The Treasury urges people to
buy bonds as a means of securing their future. Is the implicit promise one that it can make in good faith, in light of past experience of purchasers of such bonds who have seen their purchasing power eaten away by price rises? If it can be, there is no cost involved in making the promise explicit by adding a purchasing-power guarantee. If it cannot be, it seems to me intolerable that an agency of the public deliberately mislead the public."

Surely the experience of the nearly quarter-century since these words were written reinforces their pertinence. Essentially every purchaser of savings bonds or, indeed, almost any other long-term Treasury security during that period, has paid for the privilege of lending to the government: the supposed ‘interest’ he has received has not compensated for the decline in the purchasing power of the principal, and, to add insult to injury, he has had to pay tax on the paper interest. And the inflation which has sheared the innocent lambs has been produced by the government which benefits from the shearing.

It is a mystery to me—and a depressing commentary on either the understanding or the sense of social responsibility of businessmen (I say business men, not business)—that year after year eminent and honorable business leaders have been willing to aid and abet this bucket-shop operation by joining committees to promote the sale of US saving bonds or by providing facilities for payroll deductions for their employees who buy them.

(b) The Private Economy

Private use of escalator clauses is an expedient that has no permanent role, if government manages money responsibly. Hence I favor keeping private use voluntary in order to promote its self-destruction if that happy event arrives.

No legislation is required for the private adoption of escalator clauses, which are now widespread. Something over 5 million US workers are covered by union contracts with automatic escalator clauses, and there must be many non-union workers who have similar implicit or explicit agreements with their employers. Many contracts for future delivery of products contain provisions for adjustment of the final selling price either for specific changes in costs or for general price changes. Many rental contracts for business premises are expressed as a percentage of gross or net receipts, which means that they have an implicit escalator clause. This is equally true for percentage royalty payments and for automobile insurance policies that pay the cost of repairing damage. Some insurance companies issue fire insurance policies the face value of which is automatically adjusted for inflation. No doubt there are many more examples of which I am ignorant.

It is highly desirable that escalator clauses should be incorporated in a far wider range of wage agreements, contracts for future delivery of products, and financial transactions involving borrowing and lending. The first two are entirely straightforward extensions of existing practices. The third is more novel.

‘Indexation’ for corporate loans

The arrangements suggested for government borrowing would apply equally to long-term borrowing by private enterprises. Instead of issuing a security promising to pay, say, interest of 9 per cent per year and to repay £1,000 at the end of five years, the XYZ company could promise
to pay 3 per cent plus the rate of inflation each year and to repay £1,000 at the end of five years. Alternatively, it could promise to pay each year 3 per cent times the ratio of the price index in that year to the price index in the year the security was issued and to repay at the end of five years £1,000 times the corresponding price ratio for the fifth year. (The alternative methods are illustrated in Table I.) If there is inflation, the first method implicitly involves amortizing part of the real value of the bond over the five-year period; the second involves currently paying interest only, at a constant real rate, and repaying the whole principal in *real* value at the end of the five years.

**TABLE I**

**Hypothetical Indexed Bond**

<table>
<thead>
<tr>
<th>Year</th>
<th>UK Consumer Price Level</th>
<th>Payments each year</th>
<th>Method 1</th>
<th>Method 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Index (1968=100)</td>
<td>Percentage change</td>
<td>Interest (£)</td>
<td>Principal (£)</td>
</tr>
<tr>
<td>1968</td>
<td>100</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>1969</td>
<td>105.2</td>
<td>5.2</td>
<td>82</td>
<td>31.56</td>
</tr>
<tr>
<td>1970</td>
<td>112.0</td>
<td>6.5</td>
<td>95</td>
<td>33.60</td>
</tr>
<tr>
<td>1971</td>
<td>122.6</td>
<td>9.5</td>
<td>125</td>
<td>36.78</td>
</tr>
<tr>
<td>1972</td>
<td>131.0</td>
<td>6.8</td>
<td>98</td>
<td>39.60</td>
</tr>
<tr>
<td>1973</td>
<td>142.0</td>
<td>8.4</td>
<td>114</td>
<td>42.60</td>
</tr>
</tbody>
</table>

1,000 five-year bond issued in 1968 at a real rate of 3 per cent

So far, there has been little incentive for private borrowers to issue such securities. The delay in adjusting anticipations about inflation to the actual acceleration of inflation has meant that interest rates on long-term bonds have been extremely low in real terms. Almost all enterprises that have issued bonds in the past decade have done extremely well—the rate of inflation has often exceeded the interest rate they had to pay, making the real cost negative.

**Lenders’ changing expectations**
Three factors could change this situation.

(1) As lenders, who have been the losers so far, come to have more accurate expectations of inflation, borrowers will have to pay rates high enough to compensate for the actual inflation.

(2) Government purchasing-power securities might prove so attractive that competition would force private enterprises to do the same.

(3) Related to (2), if it became clear that there was a real possibility that government would follow effective policies to stem inflation, borrowing would no longer be a one-way street. Enterprises would become concerned that they might become locked into high-interest rate loans. They might then have more interest in protecting themselves against inflation.

Businessmen’s fears unwarranted

One question has invariably been raised when I have discussed this possibility with corporate executives: ‘Is it not too risky for us to undertake an open-ended commitment? At least with fixed nominal rates we know what our obligations are’. This is a natural query from businessmen reared in an environment in which a roughly stable price level was taken for granted. But in a world of varying rates of inflation, the fixed-rate agreement is the more risky agreement. To quote Alfred Marshall again,

‘Once it [the tabular standard] has become familiar none but gamblers would lend or borrow on any other terms, at all events for long periods.’

The money receipts of most businesses vary with inflation. If inflation is high, their receipts in money terms are high and they can pay the escalated rate of interest; if inflation is low, their receipts are low and they will find it easier to pay the low rate with the adjustment for inflation than a fixed but high rate; and similarly at the time of redemption.

The crucial point is the relation between assets and liabilities. Currently, for many enterprises, their assets, including goodwill, are real in the sense that their money value will rise or fall with the general price level; but their liabilities tend to be nominal, i.e. fixed in money terms. Accordingly, these enterprises benefit from inflation at a higher rate than was anticipated when the nominal liabilities were acquired and are harmed by inflation at a lower rate than was anticipated. If assets and liabilities were to match, such enterprises would be protected against either event.

Home mortgages—threat of ‘major crisis’

A related yet somewhat different case is provided by financial intermediaries. Consider savings and loan associations and mutual savings banks. Both their assets (primarily home mortgages) and their liabilities (due to shareholders or depositors) are expressed in money terms. But they differ in time duration. The liabilities are in practice due on demand; the assets are long-term. The current mortgages were mostly issued when inflation, and therefore interest rates, were much lower than they are now. If the mortgages were revalued at current yields, i.e. at the market prices for which they could be sold in a free secondary market, every US savings and loan association would be technically insolvent.
So long as the thrift institutions can maintain their level of deposits, no problem arises because they do not have to liquidate their assets. But if inflation speeds up, interest rates on market instruments will rise further. Unless the thrift institutions offer competitive interest rates, their shareholders or depositors will withdraw funds to get a better yield (the process inelegantly termed ‘disintermediation’). But with their income fixed, the thrift institutions will find it difficult or impossible to pay competitive rates. This situation is concealed but not altered by the legal limits on the rates they are permitted to pay.

Further acceleration of inflation threatens a major crisis for this group of financial institutions. And the crisis is no minor matter. Total assets of these US institutions approach $400,000 million (£167,000 million). As it happens, they would be greatly helped by a deceleration of inflation, but some of their recent borrowers who are locked into high rates on mortgages would be seriously hurt.

**Benefits of inflation-proofed loans**

Consider how different the situation of the thrift institutions would be with widespread escalator clauses: the mortgages on their books would be yielding, say, 5 per cent plus the rate of inflation; they could afford to pay to their shareholders or depositors, say, 3 or 4 per cent plus the rate of inflation. They, their borrowers, and their shareholders or depositors would be fully protected against changes in the rate of inflation. They would be assuming risks only with respect to the much smaller possible changes in the real rate of interest rather than in the money rate.

Similarly an insurance company could afford to offer an inflation-protected policy if its assets were in inflation-protected loans to business or in mortgages or government securities. A pension fund could offer inflation-protected pensions if it held inflation-protected assets. In Brazil, where this practice has, to my knowledge, been carried furthest, banks are required to credit a ‘monetary correction’ equal to the rate of inflation on all time deposits and to charge a ‘monetary correction’ on all loans extending beyond some minimum period.

To repeat, none of these arrangements is without cost. It would be far better if stable prices made them unnecessary. But they seem to me far less costly than continuing on the road to periodic acceleration of inflation, ending in a real bust.

The suggested governmental arrangements would stimulate the private arrangements. Today, one deterrent to issuing private purchasing-power securities is that the inflation adjustment would be taxable to the recipient along with the real interest paid. The proposed tax changes would in effect exempt such adjustments from taxation, and so make purchasing-power securities more attractive to lenders. In addition, government issues of purchasing-power securities would offer effective competition to private borrowers, including them to follow suit, and would provide assets that could be used as the counterpart of inflation-protected liabilities.

**Prospects for private contract escalators**

Would escalator clauses spread in private contracts? That depends on the course of inflation. If, by some miracle, inflation were to disappear in the near future, all talk of such arrangements would also disappear. The more likely development is that US inflation will taper off in late 1974, will settle at something like 6 or 7 per cent in 1975, and will then start to accelerate in
1976 in response to the delayed impact of over-reaction in 1974 to rising unemployment. During this period there will be a steady but unspectacular expansion of escalator clauses. If inflation accelerates to 10 per cent and beyond in 1977 or so, the steady expansion will turn into a bandwagon.

Needless to say, I hope this scenario is wrong. I hope that the Federal Reserve and the Administration will be willing and able to resist the pressure to over-react to the 1974 recession, that they will maintain fiscal and monetary restraint, and so avoid another acceleration of inflation. But neither past experience, nor the present political climate, makes that hope a reasonable expectation.

**Making it easier to fight inflation**

How would widespread adoption of the escalator principle affect economic policy? Some critics say indexation would condemn us to perpetual inflation. I believe that, on the contrary, indexation would enhance government’s ability to act against inflation.

To begin with, indexation will temper some of the hardships and distortions that now follow from a drop in the rate of inflation. Employers will not be stuck with excessively high wage increases under existing union contracts, for wage increases will moderate as inflation recedes. Borrowers will not be stuck with excessively high interest costs, for the rates on outstanding loans will moderate as inflation recedes. Indexation will also partly counteract the tendency of businesses to defer capital investment once total spending begins to decline—there will be less reason to wait in expectation of lower prices and lower interest rates. Businesses will be able to borrow funds or enter into construction contracts knowing that interest rates and contract prices will be adjusted later in accord with indexes of prices.

Most important, indexation will shorten the time it takes for a reduction in the rate of growth of total spending to have its full effect in reducing the rate of inflation. As the deceleration of demand pinches at various points in the economy, any effects on prices will be transmitted promptly to wage contracts, contracts for future delivery, and interest rates on outstanding long-term loans. Accordingly, producers’ wage costs and other costs will go up less rapidly than they would without indexation. This tempering of costs, in turn, will encourage employers to keep more people on the payroll, and produce more goods, than they would without indexation. The encouragement of supply, in turn, will work against price increases, with additional moderating feedback on wages and other costs.

With widespread indexation, in sum, firm monetary restraint by the Federal Reserve System (the ‘Fed’) would be reflected in a much more even reduction in the pace of inflation and a much smaller transitory rise in unemployment. The success in slowing inflation would steel political will to suffer the smaller withdrawal pains and so might make it possible for the ‘Fed’ to persist in a firm policy. As it became credible that the ‘Fed’ would persist, private reactions could reinforce the effects of its policy. The economy would move to non-inflationary growth at high levels of employment much more rapidly than now seems possible.

**VI**

**Objections to Escalator Clauses**
The major objection to widespread escalation is the allegation that escalators have an inflationary impact on the economy. In this simple-minded form, the statement is simply false—as I noted earlier in connection with the 1970 General Motors settlement. An escalator goes into effect only as the result of a previous price increase. Whence came that? An escalator can go down as well as up. If inflation slows, and hence so do wage increases, do escalators have a deflationary impact?

In the first instance, escalators have no direct effect on the rate of inflation. They simply assure that inflation affects different prices and wages alike and thus avoid the kind of distortions in relative prices and wages illustrated by the General Motors case. With widespread escalation, inflation would be transmitted more quickly and evenly, and hence the harm done by inflation would be less. But why should that raise or lower the rate of inflation?

**Incentive to raise tax rates?**

Two objections have been made on a more sophisticated level. First, widespread escalation would restrict the government revenue from inflation simply to the direct tax on cash balances produced by the issue of additional high-powered money. It would thereby reduce the revenue from a given rate of inflation, which could induce government to raise the rate of tax.

‘Living with inflation’

Second, the general public could interpret the adoption of escalator clauses as demonstrating that the government has given up the fight against inflation, and is seeking only to ‘live with inflation’. This might lead the public to raise its own anticipations of future inflation, which, by reducing its willingness to hold cash balances, could cause a once-for-all rise in the price level and to that extent be a self-fulfilling prophecy.

Neither objection seems to me weighty. If the public does not wish to stop inflation but is content to allow government to use inflation as a regular source of revenue, the sooner we adapt our institutions to that situation the better. Similarly, the second objection has little relevance to the proposal for escalator clauses as a means for removing political obstacles to ending inflation.

On a still more sophisticated level, it can be argued that, by removing distortions in relative prices produced by inflation, widespread escalator clauses would make it easier for the public to recognize changes in the rate of inflation, would thereby reduce the time-lag in adapting to such changes, and thus make the nominal price level more sensitive and variable. This is certainly possible, though by no means demonstrated. But, if so, the real variables would be made less sensitive and more stable—a highly beneficial trade-off. Moreover, it is also possible that, by making accurate estimates of the rate of inflation less important, widespread escalator clauses would reduce the attention devoted to such estimates, and thereby provide more stability.

An objection of a very different kind is that inflation serves the critical social purpose of resolving incompatible demands by different groups. To put it crudely, the participants in the economy have ‘non-negotiable demands’ for more than the whole output. These demands are reconciled because inflation fools people into believing that their demands have been met when in fact they have not been, nominal returns being eroded by unanticipated inflation.
Escalator clauses, it is argued, bring the inconsistent demands into the open. Workers who would accept a lower real wage produced by unanticipated inflation will not be willing to accept the same real wage in explicit negotiations. If this view is correct on a wide enough scale to be important, I see no ultimate outcome other than either runaway inflation or an authoritarian society ruled by force. Perhaps it is only wishful thinking that makes me reluctant to accept this vision of our fate.

VII

CONCLUSION

The conventional political wisdom is that the citizenry may mutter about inflation but votes on the basis of the level of unemployment. Nobody, it is said, has ever lost an election because of inflation: Hoover in 1932 and Nixon in 1960 lost because of unemployment.

As we leave the depression decade farther and farther behind, and as we experience more and more inflation, this conventional wisdom becomes increasingly questionable. Inflation surely helped to make Mr. Edward Heath Prime Minister in 1970 and, even more surely, ex-Prime Minister in 1974. The popularity of Japan’s Prime Minister, Mr. K. Tanaka, is at an all-time low because of inflation. President Allende of Chile lost his life at least partly because of inflation. Throughout the world, inflation is a major source of political unrest.

Perhaps widespread escalator clauses are not the best expedient in this time of trouble. But I know of no other that has been suggested that holds out as much promise of both reducing the harm done by inflation and facilitating the ending of inflation. If inflation continues to accelerate, the conventional political wisdom will be reversed. The insistence on ending inflation at whatever cost will lead to a severe depression. Now, before that has occurred, is the time to take measures that will make it politically feasible to end inflation before inflation ends not only the conventional wisdom but perhaps also the free society.

Notes

1 This is a bit of an over-simplification, because a fully defensible statement would have to allow for autonomous changes in velocity, i.e., in the demand for real balances, and would have to specify the precise definition of ‘money’. But I know of no case in which these qualifications are of critical importance.

2 One historian of money describes the debasement of the Roman denarius from an initially full-bodied silver coin until, by the time of Emperor Diocletian (300 AD), it had become ‘practically a copper coin being only slightly washed with silver’. (Rupert J. Ederer, The Evolution of Money, Public Affairs Press, Washington, DC, 1964, p. 88.) We have gone further than Diocletian. We wash our copper coins now with nickel, so that not even a trace of silver remains.

3 Excluding Treasury deposits. Nominally, the Federal Reserve Banks are owned by their member banks. This is a pure formality. In practice the Federal Reserve System is part of the government. It earns ‘income’ in the form of ‘interest’ paid to it by the US Treasury on government securities; it returns the excess of such ‘interest’ over operating expenses to the Treasury. Economic understanding is promoted and confusion avoided by consolidating the accounts of the Federal Reserve System with those of the Treasury.

4 Inflation produced an over-statement of 1973 corporate profits by more than $26,000 million (£10,800 million) through spurious profits on stocks and under-depreciation, according to Department of Commerce estimates summarized by George Terborgh, Inflation and Profits, Machinery and Allied Products Institute (revised, 2 April,
1974). At a 48 per cent corporate tax rate, the additional tax paid was about $12,800 million (£5,300 million). In addition, corporate capital gains were undoubtedly over-stated.

5 Total interest paid on the roughly $260,000 million (£108,000 million) of Federal debt held by the public was at an average rate of about 5.7 per cent. A 1973 market rate would have been about two percentage points higher, which means that the revenue to the government on this basis was about $5,000 million (£2,000 million). However, in retrospect, it seems clear that 1973 market rates did not adequately allow for inflation.


7 This is precisely what W. Stanley Jevons estimated it to be: ‘An expansion of the currency occurs one or two years prior to a rise of prices.’ (*Investigations into Currency and Finance*, Macmillan, 1884, p. 107.)

8 His discussion is reproduced in a Note to this Paper, below, p. 33

9 A useful survey is in Robert P. Collier, *Purchasing Power Bonds and Other Escalated Contracts*, Buffalo Book Co., Taipei, Taiwan, 1969 (distributed in the USA by the Utah State University Press, Logan, Utah).

10 These tax and borrowing measures are all contained in a Bill introduced by Senator James Buckley in April 1974.

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