INFLATION AND ECONOMIC PERFORMANCE

By

AXEL LEIJONHUFVUD
UNIVERSITY OF CALIFORNIA, LOS ANGELES

Paper delivered at Pacific Institute for Public Policy Research Conference,
INFLATION OR DEFLATION
San Francisco, November 20-21, 1981.

November 1981
Working Paper No. 223
University of California, Los Angeles

INFLATION AND ECONOMIC PERFORMANCE

by Axel Leijonhufvud*

University of California, Los Angeles

1. A monetary regime is defined as a system of expectations that governs the behavior of the public and that is sustained by the consistent behavior of the policy-making authorities. The effects of the Great Inflation on American economic performance, in my view, are very largely attributable to a change in regime. The conventional theory of the welfare costs of inflation, in contrast, analyzes the consequences of a rise in the rate of depreciation of real balances within an otherwise unchanged policy regime. In so defining the problem, it misses the boat.

One important class of misallocative effects of inflation will be slighted in what follows, namely those that are due to the nominal ridigity of taxes, subsidies, and sundry laws and regulations. I do not slight their importance. They are obviously of major significance. They are avoided here, rather, because in that direction lies a bottomless swamp of public finance problems, from which one could not hope to extricate oneself in a half a paper. The current inflation poses problems that go to the very core of monetary theory. These problems need to be addressed, have not been addressed, and deserve priority,

---

*I am grateful for the comments of Carlos Daniel Heymann, Earlene Craver, and Michael Darby.

therefore.

2. To have a willing audience among economists for a discussion of inflation's effects on economic performance, you must first deal with the following syllogism:

Inflation is a monetary phenomenon.

Money is neutral.

When people adapt to it rationally, inflation becomes neutral.

What is wrong about that?

The anticipated inflation model is a most useful analytical tool. Yet, for too many of us, it has been a snare and a delusion. It is a good model that makes bad theory.

To see why this is so, imagine a constant rate, fully anticipated inflation to which the economy has had time to adjust completely. All existing contracts have been concluded on the presumption, shared by both parties, that the inflation will continue at this pace forever. For concreteness, let the inflation rate be 15%. Ignoring the inflation tax on real balances or, alternatively, assuming that competition among banks will keep the real rate of return on money unchanged, we may suppose that this economy functions in real terms exactly as if the price level was constant. By assumption (for present purposes only), the inflation is strictly neutral. We want to contrast two ways of getting from this 15% inflation to a constant price level.

The slow and painful way is <u>disinflation</u>. Under the assumed

conditions, reducing the rate of growth of the money supply by 15% should bring on another Great Depression. Nobody expects the deflationary shock. It violates firm and universally shared expectations and will, therefore, bring about the worst possible contraction of output and employment. It changes the real terms of all outstanding contracts and forces a massive transfer of wealth from debtors to creditors. It is unlikely that all of this wealth transfer could in fact be effectuated; widespread bankruptcies are bound to occur and an "implosion" of the financial system similar to that of 1929-33 is probable.

This analysis of disinflation from a firmly anticipated inflation verges on self-contradiction. One poses a hypothetical inflationary process that has minimal social cost because it is fully anticipated; one juxtaposes a mode of ending the inflation that incurs maximal social cost because it is totally unanticipated. Less starkly drawn, this contrast is often painted by people who want to suggest (a) that inflation is not so bad, and (b) the time to deal with it is never now. But the game is rigged. One should not assume that people, who live in a regime where a 15% deceleration might happen at any time, are going to plan confidently on the continuation of inflation at a constant rate. If they do not so plan, however, the costs of inflation are not necessarily minimal and the entire matter needs to be reexamined.

The quick and painless way to end an anticipated inflation is a currency reform that I call the Blueback scheme. Since, under the assumed conditions, "greenback" dollars depreciate in

real purchasing power by 15% a year, one should create a new "blueback" currency and make it, by law, appreciate relative to greenbacks at 15% per year. On the initial date the exchange rate between the two monies is one for one, but from day onward bluebacks grow constantly in their legal capacity to extinguish debts contracted in greenbacks. One year later, 85 cents blueback will pay off a $1 greenback debt; two years later, it takes about 71 blueback cents; ten years later 19 cents.

If the originally held expectations of constant 15% greenback inflation of indefinite duration were indeed rational, then the blueback reform will ensure perfect price level stability indefinitely. The scheme has two advantages over disinflation. First, employment is entirely unaffected. It is not necessary to suffer through a recession to get back to constant prices.* Second, no one is swindled in the process. The real terms of contracts remain to be fulfilled as originally envisaged. The creditor who after 10 years received 19¢ blue, instead of $1 green, is getting exactly what he expected to get in real purchasing power.

Both of these advantages of the currency reform over disinflation stem, of course, from the fact that nothing is

---

*In the text above, I ignored the inflation tax on real balances and its allocative effects. In the case where greenback money is being taxed at 15% per annum, the blueback scheme introduces a new non-taxed money that will, therefore, immediately displace the old currency. Since the demand for real balances will be larger once money is no longer taxed, a larger nominal supply must be provided in order to avoid deflationary pressure on the blueback price level and the associated, probable consequences for employment.

really done about the greenback inflation. The rate of greenback inflation is not reduced at all; it is only made subject to an arithmetical conversion. It is a cheap trick, if you will. But it does not "evade the real issue." On the contrary, "really doing something" about the greenback inflation would be irrational, destructive policy under the conditions assumed. It is assumed that we start from a quite stable monetary standard which happens to have the somewhat peculiar property that the money depreciates in real purchasing power at 15% a year. The public firmly expects the continuation of this regime. To disinflate is to adopt a policy that is inconsistent with this system of expectations. It breaks the prevailing regime and wreaks havoc, therefore. The blueback scheme, in contrast, merely removes the peculiar property of this stable regime.

3. The wrong way to get rid of an anticipated inflation is to disinflate. The right way is to convert to bluebacks. Nothing could be simpler, or politically easier, than to cure an inflation that conforms to the assumptions of this model. But it does not follow that the blueback scheme is preferable to disinflation in coping with the Great American inflation. What follows is only the conclusion that the assumptions of the anticipated inflation model "evade the real issue."

The model presupposes a believable precommitment by the government with regard to future rates of money growth. This precommitment extends into the indefinite future. It binds the authorities to create money at the requisite rate so as to keep

the 15% inflation rate steady, neither more nor less. Only a firm commitment of this sort could sustain the expectations assumed in the model. Rational agents will not anticipate a rate of inflation that no one is even trying to bring about. This, then, is a system where policy makers have either relinquished or been deprived of all short run discretionary authority. The system operates, in effect, under a monetary constitution, and a very restrictive one at that.

What could be less descriptive of the policy regime that has been allowed to develop in the United States during the last twenty years?

How then should we characterize the current monetary regime of the United States? Our definition of the concept of "monetary regime" had two parts to it: it is (a) a system of expectations governing the behavior of the public, and (b) a corresponding set of behavior rules for the policy-making authorities that will sustain these expectations. We choose among possible regimes by choosing behavior rules for the policy-making authorities. In the example we have just been through, the public unanimously predicts a particular constant inflation rate and the authorities are rigidly bound to produce it.

In 1981, the monetary authorities of the United States* do not obey any reasonably well-defined set of policy rules that would tend to produce some particular, within-bounds predictable

---

*The term "monetary authorities" is used here as a catch-all for Administration, Congress, and the Federal Reserve System.

path of the price-level over the longer haul. There is no monetary constitution in effect that limits the short-run options of the authorities for the purpose of providing longer-run stability.

In order to have a label for the present regime, I will refer to it as the Random Walk Monetary Standard. This should be understood as a metaphorical name rather than a technical description of the regime. The metaphor captures some of the relevant properties, but the system is not as neat and tidy a money supply process as a random walk in the technical statistical sense.* Under the Random Walk standard (RWMS), the policy-making authorities decide one period at a time whether to accelerate, keep constant, or decelerate the rate of money stock growth. Only current economic conditions and immediate political pressures are taken into account in making this decision. It is not constrained by concern with a more distant future. What the rate of growth of the money stock is going to be at future dates will not even be discussed until the last minute -- and then it

---

*Two points on which the metaphor is technically inaccurate should be mentioned. First, the public will not think of today's money stock growth rate as simply "picked from an urn" with a known statistical distribution. For dates very close in time, information will be available or obtainable at some cost that, although subject to varying interpretations, will make educated guesses about the near-term inflation rate possible. It is for money growth rates two, five or ten years into the future that the individual investor can hardly do better than to assume that they will be drawn from an urn. Second, however, there is no theoretical reason to expect stability over time in the coefficients of this random walk. It has shown drift in the past -- that is how we wandered into the double digits -- and may well drift again in the future.

will be chosen on the basis of what seems most pleasant and convenient under the exigencies of that moment to those who happen to be in charge. Short run discretion is maximized. It is constantly exercised. The result is a monetary regime for the United States that is a thoroughly bad one, albeit not the worst imaginable.

If we look ahead only "one period" at a time (whatever length of calendar time this might refer to), the theory of a RWMS does not seem to introduce anything new. Unanticipated monetary policy will, in familiar fashion, cause rates of output and employment to diverge from "natural" activity levels. But it is not obvious that monetary policy over the next six or twelve months is significantly harder to anticipate today than it was twenty years ago. The public knows the people in office, knows the current economic and political conditions they have to cope with, and knows a little something about what economic theories they tend to be guided by. The educated guesses about what actions the authorities will take that (rational) people make from such information inputs will differ. But in this respect, things have not changed much.

What is harder to anticipate is the cumulative effects of random walk monetary management over several periods. The 1981 price-level may not have looked much more uncertain in 1980 than the 1961 price-level did in 1960. But in 1960, reasonable people thought the 1970 price level could be predicted within reasonable bounds. In 1980, putting a number on the 1990 price level can only be a joke. Under a RWMS, the uncertainty attaching to

future price-levels increases rapidly as one tries to look further into the future. It is especially the longer-term commitments of the private sector, therefore, that will be adversely affected by the refusal of the monetary authorities to precommit themselves over the longer run.

Over the longer run, monetary policy is unpredictable because we do not know what people will be in charge, what conditions they will face, or what economic theories they will believe in. Successive growth-rates of the money stock are not even the results of coordinated decisions at each separate date; they are, rather, the outcomes of the confused and unprincipled interaction of Administration, Congress, and Federal Reserve. The rules of this interaction have been more or less designed so as to dissipate the responsibility for monetary policy in the way most comfortable for all parties. Each can with reason blame the other two. But note that none of these uncertainties would matter very much if some set of constitutional constraints were in force that would prevent the rapid cumulation of moves in one direction. A useful constitution need not be as restrictive as a Friedman rule. A measure of short-term discretion can be allowed, if reversion to some mean is built into the system.

4. Our examination of the anticipated inflation model taught us that it requires as much monetary discipline to keep an inflation going at 15%, neither more nor less, as it takes to maintain price level stability. (With "discipline" we mean simply the narrowing down of the range of otherwise available discretionary

policy options). Discipline is something you accept for the sake of longer-run stability or predictability.* Conversely, constitutional constraints are relinquished in order to "buy" more scope for short-term discretionary policy.

These considerations help us explain the relationships between rates of inflation and various measures of the uncertainty associated with it. It is not obvious why highly inflationary environments should be in some sense -- some significant sense -- more uncertain. But we do not expect to see inflation rates of 15% or of 50% combined with strict monetary discipline. A polity willing and able to uphold a monetary constitution, with all the self-denying ordinances necessary to guarantee a constant inflation rate with only moderate errors, might as well accord itself also the additional benefits of a stable price-level.** Double-digit inflation as a frequent

---

*This, obviously, is as true for democracies as for other types of political systems. Constraints on the short-term discretion of elected authorities are regarded by some people as "anti-democratic" -- an argument that evidences lack of understanding of why democracies adopt democratic constitutions.

**Such a polity would not inflate for taxation purposes. If real balances are at all suitable objects for taxation, inflation is not the right way to tax them under "constitutional" circumstances. It is much preferable to raise the same revenue by taxing bank deposits and instituting a Gesell-currency (i.e., a dated currency valid, for example, only for a year so that it has to be exchanged at the Central Bank at the end of the year at the rate of one old dollar for 85¢ of "updated" money. This arrangement allows taxation of the money stock while maintaining a constant price level. It will not disrupt contracts between private parties, and avoids costs of changing prices, etc., and is therefore preferable.

Inflation remains, of course, a matchless tool for taxation (and debt-repudiation) without the consent of the governed. But then we are back, surely, in a setting without effective constitutional constraints on the authorities.

occurrence or as the normal order of business, on the other hand, we expect to observe in polities that have decided to throw off the shackles of monetary discipline to enjoy the "kicks" of monetary discretion. Inflation-rates of 50 or 100% are most likely to occur in countries where the stability of the political constitution is in doubt -- and a monetary constitution cannot be guaranteed where the political constitution is not. In a sample of low-inflation countries, we expect to find an "undisciplined" one only by the odd coincidence. In a sample of high-inflation countries, we do not expect to find any member proving its willingness and ability to forego future discretionary options and to guarantee a stable inflation rate.

5. In the anticipated inflation model, the state of expectations can be represented by a single number, namely, <u>the</u> expected rate of inflation. We could replace the constant rate of inflation in that model by a more complicated anticipated time-path. Similarly, we could allow for some uncertainty due, for instance, to technical difficulties in the way of obeying the constitution to the letter. These generalizations would not introduce anything of significant novelty. To keep in the spirit of the model, one should, however, stick to the assumption that, if not all, then the great majority of agents have <u>the same</u> probabilistic beliefs about future price levels. Incorrect expectations are systematically punished by losses and correct expectations rewarded by profits. The tendency is strong,

therefore, for individual subjective expectations to converge on the constitutionally dictated, objective time-path of prices.

If our present regime was a random walk in money growth-rates in the proper statistical sense, agents would also learn its objective properties and thus converge on the same expectations. This would be the case, for instance, if the Central Bank was required (note the "constitutional" language that unavoidably creeps in!) to have a "drawing", at fixed temporal intervals, from some normal distribution with zero mean of accelerations and decelerations of money growth rates. Today's actual inflation rate will then be everybody's expected inflation rate for all future periods.* Similarly, the variance of every agents forecast of future price-levels would blow up exponentially with distance from the present in the same way. But the statistician's Drunkard's Walk requires someone who is very drunk -- more so than Central bankers normally allow themselves during working hours.

The actual process does not obey such rigid statistical laws. It is reasonable for rational observers to hold quite different opinions about what is the likely future time-path of the price-level. The variance of an individual agent's forecast will be relatively small for the immediate short period; as in the true RW process, it will grow exponentially with distance from the present. The distribution over agents of expected one-

---

*This statement assumes, of course, that everyone expects constant real growth and a constant time-trend in velocity and that these expectations also agree.

period inflation rates should show a fairly strong central tendency; the "expected rate of inflation" of current macromodels is perhaps best thought of as the modal current one-period expected rate. But the distribution of expected price-levels by agent for dates two, five, or ten years into the future is likely to show wide dispersion. It may even be bimodal, for example.* Continued experience with living under a RWMS, moreover, will not make individual longer-term price-level forecasts converge. The RWMS process will each year reward with profits those who guessed the one-period inflation right; it will chastize with losses those who guessed wrong. But it will not teach either group how to make a "more objective", improved two-year or five-year price-level forecast. The profits and losses produced by frequent turnarounds in monetary policy serve no social function of improving collective economic performance.

6. At any time, the hangovers of past states of expectations will also be present in the form of outstanding contracts that were concluded at various dates in the past. Inflation expectations were different at different past dates. Hence we have dollar contracts today, the terms of which are still to be carried out fully, which embody inflation expectations ranging from 0% on up into double digits. Many of these contracts,

---

*The state of expectations relevant to economic decisions with a two, five or ten year horizon cannot then be summarized as a single number for econometric purposes. Indeed, the state of expectations becomes hopeless to measure and one is forced to treat it very largely as unobservable.

moreover, will owe their existence to nothing else than the difference in inflation expectations between creditor and debtor on the date that they were signed. (These, as we will see, are associated with inefficiencies in resource allocation). Picking an agent at random, we might come up with someone, for example, who is in a pension plan presuming zero inflation, has a mortgage embodying a 5% inflation premium, presently expects a 10% inflation rate over the medium term, but is still paying off a loan embodying a 15% expected inflation. And so on.

Why are these hangovers relevant? Past states of mind, one would think, should surely belong in the category of "bygones that are forever bygones." What counts for the individual private agent is indeed only the forecast he makes now. But the monetary authorities are obliged to take the legacies of the past into account.

To see why this is so, consider the reasons why bluebacking is not unambiguously preferable to disinflating as a means of bringing down the U.S. inflation rate. A return to monetary stability starts with the decision to accord legitimacy to one particular expectation about the time-path of prices. Monetary policy will seek to validate the legitimate expectation and, correspondingly, to disappoint all others. Disinflating all the way back to constant prices means that debtors who expected a continuation of inflation will have to pay much larger real sums to their creditors. At the other extreme, stabilization of the greenback inflation rate at 15%, preparatory to bluebacking down to zero, means that all creditors who expected the inflation rate

to be brought down from 15% will see part of their wealth transferred to their debtors.

Whichever way you go, the redistributive consequences are complex and colossal. Any decision to commit government policy to the realization of some constitutionally generated price-path will imply a certain pattern of such redistributions. A governmental precommitment to a particular inflation rate -- of 0%, of 15%, or any other number -- is politically easy to uphold in an economy that already has a long history of monetary stability around the inflation rate in question. When all agents hold the same expectations, the choice of what expectations to validate is not going to be difficult. The other case that is also easy occurs in the wake of hyperinflation. Hyperinflation reduces the real value of outstanding nominal contracts to next to nothing. The new constitutional framework for monetary stability can be written on a clean slate.

A Random Walk Inflation in the low double digits may be the most difficult to escape from and the most tempting to let continue.* To announce a constitutional rule is to propose a pattern of redistributions that, while largely unknown to the authorities, can be calculated by those affected. A continuation of random walk monetary mismanagement will, it is true, cause at least as much in the way of unanticipated gains and losses. But

---

*Fortunately, one of the otherwise undesirable consequences of such inflation may prove a saving grace -- contracts will be concluded for shorter terms or with call features or renegotiation options. This will reduce the redistributive problems discussed in the text.

these unfold one period at a time. There is never a point in time when their entire present value is focused on the present. An unanticipated return to monetary stability will be highly controversial, therefore. It also carries risks of recession the magnitude of which cannot, because of the complexity of the state of expectations, be accurately predicted. Consequently, it is more convenient not to decide today. This daily refusal to decide today is precisely the basic feature of the Random Walk Monetary Standard.

The redistributive implications of <u>any</u> move towards monetary stability lead to one additional conclusion. The Federal Reserve cannot be expected to decide what expectations are legitimate and should be validated. It is out of the question that the non-elected members of FMOC should on their own make and enforce decisions with such vast redistributive consequences. The concept of an independent Central Bank, manned by professional bankers and standing apart from politics, necessarily requires political agreement on a monetary constitution in order to be practicable. Professional central bankers could be held responsible for managing a gold exchange standard, or a Friedman rule, or a price stability rule, for example. Given a constitution, the independence of a professional Central Bank is, in my view, desirable. In the absence of political agreement on a monetary constitution, on the other hand, a non-political Central Bank becomes impossible. A fiat money producing bank, under those conditions, can only bend with each day-to-day shift in the political pressures on it. It may be staffed with people

of unquestioned courage, integrity, and competence -- but they will have no legitimate basis on which to resist these shifting short-term pressures.

It is very largely pointless, therefore, to blame the Fed for the erratic course of monetary policy over the last twenty years. The responsibility for monetary stability lies of necessity where the Constitution puts it -- with Congress.

7. It is time now to turn from the theory of inflation to the analysis of its effects on economic performance. An anticipated, constitutional inflation, we know, has only trivial social costs -- on the order of milk-subsidies, perhaps, or tariffs on foreign shoes. The costs and consequences of random walk inflation make a lengthy liteny, not all of which can be performed on this occasion.* I will discuss three categories of effects. The first concerns mistakes in resource allocation due to the inability to predict the inflation rate. The second comprises distortions in resource allocation that are the consequences of individually rational adaptations to the RW regime. The third concerns the social and political consequences of RW inflation.

8. The dispersion of inflation rate expectations under the RWMS will lead to inefficiencies in resource allocation that could be

---

*For more on the subject, cf. my "Costs and Consequences of Inflation," in G.C. Harcourt, ed., The Microeconomic Foundations of Macroeconomics, London 1977, reprinted in Leijonhufvud, Information and Coordination, Oxford 1981.

avoided in constitutional regimes.* Production takes time. Producers commit money today to earn revenues at future dates. For resources to move consistently into their highest valued uses all agents must be guided by the same relative prices. Agents whose inflation forecasts differ will be guided by inconsistent intertemporal relative values.

The simplest illustration runs as follows. Imagine an industry of numerous identical firms all with the same U-shaped average cost curve. The firms have to buy variable inputs at today's prices to produce output that will be sold at next period's prices. Pick a firm whose expected inflation rate happens to correspond to the inflation premium that the financial market has incorporated into the nominal interest rate. Suppose further that our hand-picked firm chooses to produce at the minimum average cost. At this output, its current marginal cost equals the discounted value of next period's price. Firms that expect more inflation will produce more, those expecting less will produce less. In either case, they incur higher unit

---

*Note, however, that it is not always possible to guarantee political agreements on a particular monetary constitution. The Great Deflation under the emerging gold standard during the last third of the 19th century, for instance, ought to have been a fairly painless affair if all individual deflation rate expectations had converged on the deflation rate that the system actually produced. But the development of the international gold standard did not follow some obviously forordained course. The decisions of countries to abandon silver or bimetallism and join the gold-standard were not foregone conclusions; the dates of these decisions could not have been predicted very far in advance. In the United States, free coinage of silver -- which would have turned the trend of prices around -- remained a live political issue until Bryan's final defeat in 1896.

costs. Average cost for the industry, consequently, is higher than it should be by an amount that varies positively with the dispersion of inflation expectations.

More generally, today's production decision is a commitment to money expenditures to be made at several dates in the expectation of revenues at (mostly) more distant dates. Again, for resources to move into their socially highest valued uses, all agents should be guided by the same real rate of interest in making their intertemporal allocation decisions. The problem caused by the dispersion over agents of expectations is most easily seen by rewriting the familiar Fisher equation as follows:

$$(r_i^e + \overset{\circ}{p}{}_i^e) = i = (r_j^e + \overset{\circ}{p}{}_j^e)$$

where i and j denote individual market participants. Competition will ensure that all transactors face the same nominal rate, i. But for both our agents to use the same real rate in their economic calculations, $r_i^e = r_j^e$, their inflation expectations would have to be uniform, $\overset{\circ}{p}{}_i^e = \overset{\circ}{p}{}_j^e$. The dispersion over agents of inflation rate expectations is likely to increase as we consider dates further removed from the present. We conclude, therefore, that long term investment is particularly likely to be inefficiently allocated.

The volume of investment will also be reduced. The expected return to investment is reduced and its variance (obviously) increased. Both factors will tend to depress the demand price for capital goods and thus the rate of capital accumulation.

Consider a firm "representative" of the industry in our previous illustration. It will make mistakes in choosing its

output rates with some representative frequency. In the RWMS environment, such errors will be more frequent and larger than they would be in a regime providing monetary stability. To the extent that the cost of these inefficiencies are born by firms themselves and not transferred to customers or suppliers, profits on capital are reduced. So are prospective earnings on new investment. This tendency is reinforced when the tax law treats an increase in nominal earnings as growth in real profits. It is further reinforced by price controls and other forms of governmental intervention that RW inflation tends to induce.

9. In the financial markets, the most obvious consequence of the random walk regime is the thinning out of the long term bond markets. Since the dispersion of price levels fans out rapidly as one tries to look farther into the future, lenders and borrowers will be equally reluctant to commit themselves to long term nominal contracts. Neither side can get a risk-premium from the other. Consequently, we expect the volume of such contracts concluded to shrink (and the volume of such investments as are normally financed in this way to decrease even further than implied above).

A more interesting problem is posed by the fact that, until recently, nominal rates of interest on short and medium term placements did not in general rise sufficiently to compensate for the inflation. Such assets continued to be held year in and year out in large volume at <u>negative</u> real rates.

A clue to this problem may be found in the strong incentives

to procrastinate created by the random walk regime. Agents will seek to postpone commitments beyond the point in time when they would normally be made in a stable money regime and also to reduce the volume of commitments that are difficult or impossible to postpone until late in the game. This incentive affects not only long term investments and financial contracts, but relatively short term ones as well.

As an example, consider from the standpoint of date $t = 0$, an expenditure of funds that will produce sales-receipts at some later date -- for instance, $t = 3$. If we take as our example of a constitutional regime one that operates on a Friedman rule, the variance of the t_3 price-level looks much the same from t_1 as it does from t_0. One would pay only a very modest sum for the privilege of postponing the commitment to reduce the uncertainties stemming from monetary policy. Under the RWMS, the perceived uncertainty of the t_3 outcome will be very much reduced if it is possible to wait until t_1 before an irrevocable decision is made.

Haste makes waste. There will be some social cost in the inefficiencies of trying to live with shorter lead-times. But the more interesting aspect of this inducement to procrastinate is the increase in <u>flexibility preference</u> that it implies.*

---

*For the concept of flexibility preference, cf., A.G. Hart, "Risk, Uncertainty, and the Unprofitability of Compounding Probabilities," in W. Fellner and B.F. Haley, eds., <u>Readings in the Theory of Income Distribution</u>, Philadelphia, 1961, and J.R. Hicks, <u>The Crisis in Keynesian Economics</u>, Oxford 1974, Chapter II.

Short term, money denominated assets will carry an increased flexibility premium, which is to say that they will yield a lower real rate of interest relative to longer term placements.

The real term structure of interest becomes more of a speculative notion than an empirically operational concept under random walk monetary conditions. The dispersion of expectations (which are largely unobservable) makes it unclear how we would obtain a number with a good claim to being the real long term rate of interest. But we have argued that real corporate earnings will be reduced under the RWMS. This is consistent with the behavior of stock markets. The low real rates of return in prospect on long term fixed investments should put a ceiling on the long term real rate of interest that people are willing to pay in order to finance such investments. We conclude, therefore, that the entire real term-structure schedule shifts down. In addition, the increase in flexibility preference will push down short rates relative to long rates. In the Random Walk regime, consequently, fully foreseen negative real rates can be a steady-state phenomenon. Note that the analysis hinges on the increase in the perceived uncertainty of the price-level with distance from the present. The flexibility premium could disappear without any reduction in either the rate of inflation being experienced or in the perceived uncertainty about its immediate future. What it takes is a dimunition in the ratio of the variance of long term price-level forecasts to that of short term forecasts.

10. The market economy is among other things a system for selecting people for fame and fortune (mostly fortune). The system is supposed to award material wealth for hard work, for thrift, for alertness to the wishes of the sovereign consumer, and for inventiveness. Reasonable people may disagree about how "deserved" is the distribution of wealth that emerges in this way. What is indisputable is that monetary instability must change the rules of this natural selection and hence promote a different breed.

Under a random walk monetary regime, being efficient and competitive at the production and distribution of "real" goods and services becomes less important to the outcome of socio-economic activity. Forecasting inflation and coping with its consequences becomes more important. People will reallocate their effort and ingenuity accordingly.

Survival and prosperity under a competitive regime require the capacity to adapt to changing conditions. Inflation brings a marked change in the relative significance of two broad types of adaptive skills. The product designer who can come up with a marginally improved or more attractive product, the production manager who in a good year can increase the product per man hour by a percent or two, the vice president of sales who might reduce real distribution costs by some similar amount, are all examples of roles that have become less important to the stable functioning or survival of a corporation. Other functions requiring different talents have increased in importance: the vice president of finance with a talent for so adjusting the

balance sheet as to minimize the real incidence of an unpredictable inflation is an example. The creative financing artist floats to the top in real estate. But the "wise guy" who can do a good job at second-guessing the monetary authorities some moves ahead is the one who really counts. Smart assessment of the risks generated by the political game in Washington comes to outweigh sound judgment of conventional business risks. Other roles will gain in importance also (for reasons that we will come to). Among them is the lawyer capable of finding ways to minimize the impact of sudden new governmental interventions and that of the operator who is quick to spot ways of making profit (or avoiding loss) from new subsidy, quota, or price control schemes.

In short, being good at real productive activities -- being competitive in the ordinary sense -- no longer has the same priority. Playing the inflation right is vital. In the sixties and seventies, this has been the way for ambitious Americans to get rich. But an entire people cannot improve their living standards by playing this game.

11. In this inflationary environment, private contractual agreements become more uncertain as to their real outcome. Unpredictable inflation redistributes wealth without rhyme or reason, producing results that by generally accepted standards are unjust and unfair. Inflationary redistribution is a most peculiar injustice in that it is one for which the injured party cannot seek redress in the courts. The courts cannot deal with

inflationary injustices because what is basically at issue in disputes of this kind is what expectations the parties ought to have had in signing the contract. In a system with a monetary constitution, legitimate inflation expectations are defined and monetary policy seeks to validate them. In our old illustration of an economy with a 15% constitutional inflation rate, for instance, the courts would have no problem -- a creditor who expected a lower rate (or a debtor who expected a higher rate) would have to bear the consequences. In the absence of any constitution, however, the courts have no norm that could be applied in seeking to restore justice to contracts disrupted by inflation.

Contracting is a means of controlling the future activities of others so as to reduce uncertainty to manageable proportions and make it possible to pursue a course of action with a reasonable prospect of success. Inflation renders contracting a less effective, less reliable strategy for controlling the real terms on which one can obtain or dispose of resources. When private contract fails, political compact becomes the substitute strategy. It is predictable, therefore, that Random Walk monetary policy will bring in its wake an upsurge of efforts by all sorts of groups to obtain by public compulsion what private cooperation will not achieve. Legislatures will be swamped by demands to control X's prices, regulate Y's way of doing business, tax Z, ... and subsidize me.

12. Finally, the consequences of the American inflation do not

stop at the nation's boundaries. The inflation must be judged, also, as a momentous foreign policy fiasco, one of far greater long run consequence than the sundry setbacks that have so exercised the public. It is the long run interest of the United States that as many countries as possible "opt for the West" in how they let their economies develop and become integrated in the world economy. The rapid and irregular depreciation of the world's leading key currency and the stagnating growth of the major trading nations has obviously reduced the apparent advantages of the pro-Western course. And the inability of the United States, demonstrated over a decade and a half, to put its own house in order makes it seem very doubtful that the conditions will be restored under which free market economies can again develop under favorable conditions.

13. No one would wish to argue that the inflation has been the only factor in the disappointing performance of the American economy in recent years. Yet, in my opinion, the last decade and a half of monetary mismanagement has been a self-imposed disaster for the United States the dimensions of which the economics profession has only begun to realize.