POLICY REPORT

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The Decline of the Private Sector: Inflation's Aftermath

By Robert L. Greenfield

Inflation and the decline of the private sector typically proceed hand in hand. The slump in relative U.S. industrial productivity during the current inflationary episode, for example, accounts for widespread concern. Yet, prevailing public sentiment appears to consider the worsened productivity no less responsible for the inflation than the inflation is for the worsened productivity. This view risks neglect of inflation's responsibility for sapping the private sector of its vigor. One's grasp of the nature of inflation strengthens with appreciation of the causal linkage running from inflation to the decline of the private sector.

The Analytic Setting

Decentralized markets play a crucial role in communicating the information needed to render mutually compatible the expectations of disparate individual decision makers. Expectations held at a particular point in time are based to a large extent on prevailing prices. A monetary shock, say, in the form of an unexpected increase in the rate of money supply growth disrupts this coordination by redirecting the flow of money expenditures and consequently disturbing various price relationships. Ultimately, individuals' expectations must accommodate this redirected and heightened flow. Nonetheless, the disappointment and reformulation of plans is central to the complex adjustment process which follows a monetary shock.

As the private sector continues to be buffeted by shocks emanating from erratic monetary policy, the long-dormant interest in business cycles is awakening. This renewed interest in business cycles itself suggests a concern with the vitality of the private sector after the monetary shock has dissipated. My contention is that the private sector will have been weakened considerably compared with the situation prior to the shock. To focus attention on this matter, I shall take up the analysis at the point at which the monetary shock has worn off. Expectations are therefore conceived as having caught up with the actual rate of monetary expansion, and all money prices are imagined to be rising at the same rate. As a result, relative prices, the prices of goods and services in terms of one another, remain unchanged.

> "Inflation is responsible for the decline in productivity as well as a general sapping of the private sector's strength."

This method should be understood in no way to constitute a denial of the importance of changes in relative prices. The adjustment process for which the monetary shock serves as a catalyst is characterized by movement of productive factors from one occupation to another. The motivation for such movement of factors of production is, of course, changes in the relative prices of the goods and services which these factors are capable of producing. My intent here, however, is not to provide an exhaustive description of the adjustment process.[1] Nor is it to ascertain how quickly expectations accommodate the altered monetary policy. Rather, mine is the more modest task of demonstrating that even if this cyclical adjustment process is considered as having worked itself out, the private sector will be in a weaker position when compared with its earlier standing. And for this purpose the assumption that a "steady state" has been struck is a convenient tool of analysis.

Preliminary Considerations: Determination of Interest Rates

Much of the following discussion of the way inflation stifles the private sector revolves around the behavior of interest rates during inflationary periods. Consequently, it is useful to outline briefly the nature of market determination of interest rates. Such a sketch serves as a foundation on which to build one's understanding of the allocative effects of inflation.

Consider, then, the perspective of an individual whose internal rate of discount is 4 percent. Assured consumption one year from today of at least that bundle of goods which today can be purchased for $1.04 is required in order to induce such an individual to forego consumption today of goods available for exactly $1. Alternatively, assured consumption one year from today of goods available today for exactly $1.04 is sufficient to induce this individual to forego consumption today of no more than that bundle of goods which can be purchased for $1. As is readily seen, the procedures

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EDITORIAL

The Democrats' New Ideas

Many Democrats are insisting these days that their party has "new ideas." Morton Kondracke, executive editor of *The New Republic*, has argued in his magazine and in other forums that the Democrats are putting together a "coherent alternative" to Reaganomics. Sometimes it seems that the "newness" of the ideas is more important than their content.

Of course, this whole discussion is predicated on the notion that President Reagan has implemented dramatically new programs based on new ideas. Kondracke writes that "the free market and laissez faire are having their last tryout in the United States," apparently considering laissez faire to be a system in which the government takes some 40% of the resources of society (in on-budget spending; never mind off-budget expenditures, mandated private expenditures, and the like), in which businesses must comply with 40,000 pages a year of federal regulations, in which 850 occupations are closed off by licensing, and in which federal spending in real terms continues to rise by some 3% a year.

Leaving aside this mind-boggling confusion about Reagan and laissez faire, however, let's consider what Kondracke identifies as the Democrats' new ideas.

First, of course, all the Democratic presidential candidates favor "large-scale expenditures" to rebuild roads, bridges, and waterways, and to provide jobs. That's been the Democratic program at least since 1933, so it's difficult to see just what is new about it.

The Democrats are in favor "of lower interest rates to promote growth in the private economy." Kondracke simply states that, with no explanation as to how they intend to achieve it. Presumably they would support Sen. Robert Byrd's bill to order the Federal Reserve Board to bring interest rates down. But today even a massive infusion of newly created money into the capital markets may drive interest rates up as investors have wised up to the price inflation that follows. Perhaps the Democrats' new idea is to emulate King Canute and simply command the rates to recede.

The Democrats "believe in 'partnership' among government, labor, and management to promote foreign trade and hold down inflation." One suspects that the government would be the senior partner, but what is new about such an arrangement? We already have industry-government councils for both these purposes, and they have been manifestly unsuccessful.

Some of the "real new" Democrats want an industrial policy that would "promote technological winners." (The older new Democrats like Edward Kennedy and Walter Mondale, competing for the endorsements of unions in the "loser" industries like steel and autos, are still committed to federal support for older, failing companies.) This sounds like an appealing idea — no more Chrysler bailouts; instead we'll help those companies that can be successful. But the only way to know which companies or industries will be "winners" is to let the market decide. The editor personally thought the long-promised "picturephones" — which would enable telephone callers to see as well as hear — were a fantastic idea; had he been handing out government help to "winners," he would have backed them to the hilt. They didn't succeed in the marketplace, however, while video games — which bore the editor — did. Americans should all be glad the editor wasn't in charge of picking winners. And we should resist any attempt to give such power to Gary Hart, Felix Rohatyn, or any public official.

The Democrats' new ideas boil down to tinkering with their old program. They still want more federal spending, but they're going to change the names of the programs. Some of them want to subsidize Apple Computer instead of Chrysler, a prospect that should frighten real entrepreneurs in potential "winner" industries. Oh, and they're for lower inflation, more jobs, and lower interest rates, and they have a bill that says it has to happen. ■

A Note from the Editor

With this issue *Policy Report* is undergoing some changes. In an attempt to make *PR* more useful to its readers, we are adding a lengthy section of Policy Study Reviews, in which we will review the most significant of the new policy studies being produced by think tanks, academic institutions, and other organizations. Busy readers need to know the latest thinking on important public policy issues, yet they find themselves unable to keep up with the increasing output of such work. *Policy Report* will select the most important studies to be reviewed by our staff and academic associates to keep our readers abreast of this flow of new information. We will also begin publishing excerpts from the monthly Cato Institute Policy Forum at which a public policy analyst presents a talk on a pressing issue and another analyst comments. Another new feature will be several short essays on current policy topics, often taken from longer studies. To make room for all these new sections, we will drop one of our feature articles, though we will still publish one original article each month, and we have discontinued the various side features of *Policy Report* (with the exception of "To be governed..." because we all need a little relief from the serious side of policy analysis). It is our belief that these changes will make *Policy Report* even more valuable to our subscribers, who will be better able to keep abreast of the newest public policy analysis. We hope you enjoy it. ■

Inflation's Aftermath (Cont. from p. 1)

embedded within these two characterizations, "compounding to the future" and "discounting to the present," respectively, are arithmetic operations which are reciprocal to one another. Discounting merely "undoes" what is done by compounding. Suppose that given a discount rate of 4% one wishes to ascertain the present discounted value of $1.04, which is to be received in one year. This determination requires that one calculate the magnitude of the sum which compounds to $1.04 when invested at a market rate of return of 4% for one year. That sum, $1, is the present value of $1.04 under the postulated conditions.

Clearly, individuals differ considerably in terms of their inclination to forego current consumption as well as their ability to discover ways in which to transform foregone claims to current consumption into enhanced consumptive opportunities in the future. Some, while capable of advantageously transforming the time pattern of consumption opportunities, are nonetheless hesitant to part with current consumption. Others, although less entrepreneurial in character, are more inclined to finance investment projects by relinquishing claims to current consumption. Financial intermediaries bring these groups of people together, and out of the ensuing market process emerges a structure of interest rates which tends to equate the demands for dated consumption claims with their respective supplies.

Inflation and Investment Decisions

Suppose that the individual introduced in the preceding section owns a portion of the assets of a firm whose management is contemplating the following investment opportunity. The prospective investment involves an initial outlay of $4,200 in the acquisition of a machine, the use of which will generate assured receipts of $1,700 at the end of each of the succeeding three years. The market rate of interest is expected to remain 5% throughout this time period.

The before-tax cash flow is recorded in columns 1 and 2 of Table I. The owners of the firm, however, are concerned with the investment's after-tax cash flow pattern. Compliance with U.S. tax laws requires calculation of depreciation expense, a permitted deduction in the determination of taxable cash flow, on an historical outlay basis. The taxable cash flow figures in column 4 are obtained by the straight-line depreciation expense method of deducting from before-tax cash flow one-third the price of the machine, an amount shown in column 3. The project's cash flow net of depreciation expense is assumed to be subject to a 40% corporate income tax rate; this establishes the tax liability of the firm, which is shown in column 5. Column 6 contains the after-tax cash flow figures.

Should the firm's management undertake the investment?[2] Clearly, a decision requires a comparison of cash outlays and after-tax cash receipts. Here, however, apparent difficulties are encountered, since the outlay and each of the inflows are expressed in fundamentally different units. A dollar to be received two years from today cannot be compared directly with a dollar to be received one year from today. Neither of these can be compared directly with a dollar spent now. An informed decision concerning this investment opportunity requires that the after-tax cash flow figures of column 6 be expressed in comparable units — present discounted value units as in column 7. The net present discounted value of the project considered in its entirety, then, is simply the algebraic sum of column 7, $102.73. The fact that the present value of the stream of after-tax cash receipts exceeds that of the disbursements indicates that (all other things unchanged) the management of the firm is well advised to embark upon the project. In doing so, it enhances the wealth of the firm's shareholders.

This is seen perhaps even more graphically by noting the consequences of the firm's decision to finance the invest-

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Inflation's Aftermath (Cont. from p. 3)

TABLE I

1 End of Year	2 Before-tax cash flow	3 Depreciation expense	4 Taxable cash flow	5 Tax liability	6 After-tax cash flow	7 Present value of after-tax cash flow
0 (present)	-4200	---	---	---	---	-4200.
1	1700	1400	300	120	1580	1504.76
2	1700	1400	300	120	1580	1433.11
3	1700	1400	300	120	1580	1364.86
				Net present discounted value		$ 102.73

TABLE II

End of Year	Before-tax cash flow	Depreciation expense	Taxable cash flow	Tax liability	After-tax cash flow	Present value of after-tax cash flow
0 (present)	-4200.	---	---	---	---	-4200.
1	1785.	1400	385.	154.	1631.	1466.07
2	1874.25	1400	474.25	189.70	1684.55	1361.08
3	1967.96	1400	567.96	227.19	1740.77	1339.53
				Net present discounted value		33.52

ment, say, by selling an annuity involving three annual $1,580 payments. How much can market participants be expected to pay for such an annuity? They will pay no more than the amount compounding to the terminal value of the annuity itself when invested at 5% for three years. The first $1,580 payment is to be received one year from now and therefore has a two-year compounding period. At 5% interest it compounds to $1,741.95. The amount which must be invested now in order to yield this compound is $1,504.76, the figure shown in the second row of Table I's column 7, and is alternatively described as the present value of $1,580 to be received one year from now. The figures corresponding to the second and third annuity payments are in column 7's rows 3 and 4, respectively, and when they are added to the figure in row 1, a $4,302.73 sum obtains. This $4,302.73 sum is the price capital markets are expected to assign the annuity. Should the price momentarily stray, say, beneath $4,302.73, profit can be made simply by borrowing funds to buy the annuity. The annuity's terminal value is sufficient to cover the obligations to creditors so incurred and still leave a pure profit. Persistent attempts to take advantage of such an opportunity constitute a market force tending to maintain the annuity's $4,302.73 price. The firm's selling the annuity, buying the $4,200 machine, and relying on the cash inflow generated by the project to meet its annuity payment obligations thus provides its owners with an immediate $102.73 net gain.

In assessing inflation's impact upon the evaluation of a prospective investment project, one's initial concern is the behavior of interest rates during inflationary periods. Now, the personal tax liability associated with ownership of stock and bonds is assigned on the basis of nominal rather than real receipts of interest. As prices rise and receipts generated by holding financial instruments increase, the base of one's tax liability increases even if it is unchanged in terms of purchasing power. This, of course is exacerbated by the progressivity of the tax system itself. Not only is there now more to tax, it is taxed at higher rates as people are dragged into higher tax brackets. Clearly, prospective buyers of financial instruments must be compensated for this heightened tax liability *as well as* the increased prices of goods which they intend to purchase at a later date if the incentive to defer present consumption is to be maintained.

Suppose, for example, that the individual who requires at least a 4% real after-tax return in order to forego one unit of real consumption today is placed in the 20% tax bracket. In a period of price stability a market rate of 5% provides a minimally acceptable real after-tax return of 4%. Assume further that prices are expected to rise at a 5% annual rate. To what level must the interest rate rise in order to insulate this person from the joint effects of increased prices and taxes?

Were this individual's tax payments to remain unchanged, a nominal yield of 9 percent would provide the necessary 4 percent real after-tax yield. However, since receipt of interest is taxed on a nominal basis, the interest rate must rise further to 11.25 percent in order to provide a real after-tax return of 4 percent. If this person is forced into a higher tax bracket, the nominal yield would have to rise still higher.

The manner in which inflation and the U.S. tax system jointly retard the rate of capital formation is now clearly seen. Assume that the project being considered is "typical" in the sense that the before-tax cash flow which it generates keeps pace with the general level of prices and rises at a 5% annual rate. Further, assume that the market interest rate rises to 11.25%. In considering the attractiveness of this project, management once again calculates its net present discounted value, which as indicated in Table II, now has become negative. The decision not to pursue the project prevents a reduction in the wealth of the firm's shareholders. Since the productivity of labor, and consequently its real wage, depend on its use of capital, one source of the worsened position of labor in the U.S. is apparent.

It is instructive to consider just why the project's present value becomes negative upon the introduction of rising prices. The 5% rate of increase in the general level of prices involves no change in the real value of the before-tax cash flow of a project pursued by a "typical" firm, since the nominal cash flow also increases at a 5% rate. Depreciation expense, however, which is calculated on a historical outlay basis, declines in real terms. As a result, the firm's taxable cash flow grows more quickly than the rate at which prices rise, thereby yielding an increase in its real tax liability. Nominally, the corporate tax rate is 40%. Effectively, it is considerably greater.

Having noted the deleterious consequences of heightened effective corporate tax rates, one can more easily appreciate the rationale for the recent change in tax laws pertaining to depreciation expense. Enactment in 1981 of a bill which provides for reduced plant and equipment write-off periods, the so-called 10-5-3 formula, is expected to reduce the real tax liability which firms suffer as a result of investment activities.[3] The resulting stimulus applied to capital accumulation should increase the productivity of labor and positively affect its real wage.

The Inflation Tax: Government Revenue From the Creation of Money

It is well known, of course, that various legislated tax mechanisms generate additional government revenues during periods of inflation. Income tax revenues rise, for example, as a receipt of higher nominal incomes drags taxpayers into higher tax brackets. Less widely recognized, however, is the fact that inflation itself, that is, central bank-directed expansion of the money supply, constitutes a significant source of government revenue. Each time the Federal Reserve System inflates the money supply the Treasury's command over real goods and services is extended.

> **"Each time the Federal Reserve System inflates the money supply the Treasury's command over real goods and services is extended."**

The operation of the "inflation tax" mechanism is well illustrated by the following scenario. An individual, whose income during an initial period in which prices are stable is $10,000, wishes to hold 5.2 weeks' income in the form of money. With an income of $10,000 this requires that $1,000 in the form of those assets, say, checkable deposits and currency, which are collectively labeled money, be held by this person. Between the initial period and the one immediately following, the Fed inflates the nominal money supply in an amount sufficient to cause prices to rise by 10%. The individual's income rises to $11,000, an amount which has the same purchasing power as did $10,000 in the preceding period. But real money balances held by this person, the number of weeks' income held as an asset in the form of money, declines. Rather than holdings of money amounting to 5.2 weeks' income, they now amount to 4.8 weeks' income, a result which does not accord with this individual's desired portfolio of assets.

How might this undesired reduction in real money holdings be prevented? Clearly, nominal money holdings must be increased by $100 if these holdings are to continue to represent 10% of the individual's annual income. The source of the additional $100 in money balances is the sacrifice of something for which the market establishes a price of $100.

That members of the private sector relinquish assets and thereby augment nominal money balances in an amount sufficient to maintain real money holdings at some determinate level is established by considering the nature of the open-market purchases used by the Fed to inflate the money supply. In conducting such a purchase, the Fed obtains in exchange for a check written on itself a Treasury security formerly held by some member of the private sector. The magnitude of this transaction is the extent to which the Fed increases the financial system's monetary base. The stock of base money, which is comprised exclusively of governmental monetary liabilities to the private sector, is used in part as bank reserves. The balance leaks out of the banking system and takes the form of currency, remaining available for use as bank reserves should asset preferences swing in favor of deposits relative to currency. And since the banking system operates on a fractional reserve basis, the increase in the nominal money supply is considerably larger — nowadays about 2.5 times larger — than the increase in the monetary base. Thus, the exchange has transpired. The private sector has relinquished the government security and in return received the additional nominal money balances required in order to maintain real money holdings at the desired level. If, however, this inflation of the nominal money supply constitutes a tax, the transfer of real resources from the private sector to the public sector should be plainly visible.

(Cont. on p. 8)

Beyond the Sagebrush Rebellion: Privatization of Public Lands

Every month the Cato Institute holds a Policy Forum at its Washington headquarters at which a public policy expert discusses an important issue before an audience drawn from Congress, the executive branch, interest groups, and the public policy community. A recent Policy Forum featured Steve Hanke, a professor of applied economics at Johns Hopkins University and until this summer a senior economist with the President's Council of Economic Advisers, where he was instrumental in formulating the administration's policy on the privatization of federal lands. Commenting on Hanke's talk was Richard Stroup, co-director of the Political Economy Research Center at Montana State University and currently director of the Office of Policy Analysis at the Department of the Interior.

Steve Hanke: Before we begin to discuss federal timber policies we must make several background observations. One, lumber and wood products are an important sector in the U.S. economy. For example, lumber and wood products account for about 14% of the total cost of building a new home. The second thing we must realize is that public ownership of forest lands is about 28% of the total while public ownership of mature timber inventory is 63%. This large gap between land ownership and inventories is due to the fact that very little mature timber has been harvested off the national forests. Since we've essentially run out of private mature virgin timber, we're faced with a situation where the big inventories of mature timber are in the Northwest — where public ownership is greatest.

Now, let's look at the federally owned forests — both the system and the critiques of it. Federally owned forests have all the characteristics of bureaucratic socialism. They're publicly owned and managed. Investment decisions — in this case the big investment decision is whether you are going to cut a tree or let it grow — are made by these public agencies.

Economic factors, both in value and cost, are largely ignored in making management and investment decisions. The method used to plan harvests on the public forest, referred to as non-declining even flow, is basically a physical concept. The maximum amount that you can cut off any forest unit is equal to the annual increment in growth on that forest. And the harvest rate cannot fall below the original level that you start cutting at in year one.

A Cato Institute Policy Forum

This non-declining even flow, which is the heart of the investment decision process, assumes that there are no capital carrying charges on the timber inventory. In other words, it implicitly assumes that interest rates are equal to zero. Now this justifies, of course, holding a much larger timber inventory than would be economically justifiable or would be an outcome of the market process.

Okay, so much for background. Now, let's go into the critiques of real-world bureaucratic socialism. This has been uniformly criticized in the academic and professional literature. The suggested solutions to the problem have varied depending on the academic background and the perspective of the writers. One school of thought focuses on politics. This solution does not involve either perfect market competition with fully efficient resource allocation or a free market process, but rather some generally ill-defined notion of perfect political competition among interest groups. Responsiveness to interest group competition is the ideal.

Another group stresses the inefficiencies with which the bureaucrats perform their task, often calling attention to the slowness and cost inherent in the process of bureaucratic socialism. Hence, the focus is on improved administration and the procedures for policy formulation and implementation.

The third view of bureaucratic socialism's failure is economic, with the ideal being either the efficient allocation of resources or the creation of a free market process. This view is held by two branches of the economics profession — market socialists and free-market economists. In the free-market group we primarily have the Chicago School and the Austrian School. The market socialists want to retain public ownership and control of the management and investment decisions as well as the assumption of risks in the public sector. They desire to simulate market values and costs centrally and then operate the socialist system with their simulated prices. Ideally, a market solution is forthcoming and resources are allocated efficiently in this highly abstract and theoretical world. The free market, private property economists have shown that public ownership and/or the political process wastes resources. Although the Chicago and the Austrian approaches to analysis are quite different, both argue that private property is essential.

Now, let's look at timber policies for the '80s. I believe that some elements of simple and pure free trade policies would increase the value of U.S. forest assets and increase employment in the timber and wood processing industries almost immediately. The first policy that has to be changed is the ban on the sale of logs from federal lands to foreign buyers. This export ban should be eliminated.

The second rather straightforward policy change is the elimination of the Jones Act that requires logs to be shipped in high-cost U.S. bottoms from the Pacific Northwest around to the East Coast. As a result no logs are shipped out of the Pacific Northwest to the East Coast market. We can demonstrate rather clearly that the Jones Act is impeding trade from the Northwest because 25% of all the Canadian exports of timber into the United States are shipped by water from British Columbia to the East Coast of the United States. This amounts to about 2½ billion boardfeet of timber per year coming from Canada while no timber is being cut and shipped from the Northwest to the East Coast.

The second set of proposals are intermediate-term solutions to the problem of national forest ownership. We have to eliminate the non-declining even flow scheduling rule for harvest off the public lands, so that we can double or triple the cutting rate. This would occur with an economic cutting rule that included capital carrying charges on timber inventories.

In the long run the only possibility for solving the timber problems that I alluded to earlier is to sell the national forests at auctions. I wouldn't worry too much about the prices received at the auction because of the following advantages of selling the forests.

One is that it would eliminate very large negative cash flows that are associated with holding timber assets by the federal government. Right now the federal government on a cash-flow basis loses over a billion dollars a year holding these forest resources, and this isn't counting any capital carrying charges — remember, they assume it's zero. So one could, from a purely fiscal point-of-view, justify quite easily giving the national forests away. Politically, that would probably be untenable, so I would suggest having an open auction and not worrying too much about the prices received.

Second, the productivity of these lands would increase dramatically. We would see a higher inventory turnover rate on these lands, and we would get a proper inventory adjustment that's not taking place with public ownership. We'd start adjusting that mature timber inventory and drawing it down. Our balance of payments situation would certainly improve.

I see some political obstacles associated with this. The biggest one is that the existing owners of timber assets on private lands would like to see all the timber on federal lands totally locked up, not cut. They'd like to see a wilderness blanket put over all the national forests, because it would reduce the potential competition with them. So these existing owners of private timber are a big problem. The second big problem is the environmentalists who simply don't think that private property institutions and free markets can possibly work in natural resources matters.

I believe that these proposals I've outlined would reduce our short-run problems in the timber and wood products industries. In addition they would set in place property institutions that are consistent with a free society, and they would certainly promote economic efficiency, employment, and growth. Consequently, the American consumers have a real stake in seeing to it that these free market proposals be adopted. Moreover, the residents of areas where public timberlands dominate have a particularly high stake in promoting these policies. For them the choice is clear: Do they want to stagnate under the current system of bureaucratic socialism or prosper with private property and free markets?

Richard Stroup: The federal government holds a third of the nation's land, and a small fraction of that total is being inventoried and selected for sale. That will amount to several million acres and will yield several billion dollars in revenues for the Treasury over the next five years. In addition to that, though, it should increase the efficiency with which the lands are used, along the lines that Steve mentioned. It will distribute those increased benefits more broadly among all the citizens than those benefits are currently being distributed. As the title of the administration's program suggests, the program really is aimed at improving the management of federal assets. The program of the administration, though very modest certainly by Steve's standards, is nevertheless consistent with looking at portions of the national forests and divesting them into the private sector. That kind of a program is taking a bum rap.

Another mistaken criticism made of the privatization effort is that private owners will simply have a short-term outlook. Again this is connected with the "rape, ruin, and run" kind of accusation, but if we remember the fact that an asset's value reflects the high bidder's view of what that asset will produce from then on, we see that the day the future productivity visibly declines is the day the asset value declines in the market. That's the day the owner's wealth falls. The owner of an asset has his wealth held, in a very real sense, hostage. One can't say the same for the manager of federal lands. So when these chunks are put into the private sector, I would expect a longer term view to be taken of their management. We see all the time stories of how cities are taking the short-run view — letting facilities decline, failing to keep up sewer systems and that sort of thing — even though the cost in the long run is very great. The fact is that's some other politician's problem down the road.

This business of the wealth transfer, I think, is very interesting. Given the kind of costs and revenues received in the management of the public land programs, it's not hard to make a case that current public land management helps the few at the expense of the general taxpayer relative to the sale of that land. However, if fair market value is received by the Treasury, then more or less by definition all the citizens will in fact benefit from the privatization efforts. Currently only the users have a tendency to benefit from the federal ownership. ■

Inflation's Aftermath

(Cont. from p. 5)

In conducting the open-market purchase, the Fed absorbs into its portfolio of assets an outstanding government security, a liability of the U.S. Treasury. The former owner of the security, a member of the private sector, would insist upon punctual payment of interest and face value. The Fed, however, is a nonprofit organization which remits its revenue in excess of operating expenses to the Treasury. It therefore requires no such payment.

Now, presumably the Treasury has an expected flow of conventional tax receipts which it intends to use in paying interest on its outstanding debt and liquidating that debt upon maturity. An open-market purchase results in a portion of that debt being held by an agency which excuses the Treasury from obligations to which it would be held by the private sector. Expected tax revenues earmarked for the purpose of fulfilling these obligations are therefore released — released for use in the service of newly-issued debt. Although the security obtained by the Fed might be nominally regarded as outstanding, it is effectively retired. The Treasury is therefore in a position to issue new securities and service them without increasing conventional taxes. The proceeds of the ensuing bond sale are used to purchase goods and services from the private sector. The items thereby obtained represent the government's real revenue from the creation of money.

In order to underscore the sometimes symbiotic nature of monetary and fiscal policy, it is useful to regard government not as the Treasury alone but as the Treasury and the Fed taken together. The government's balance sheet, then, is constructed by consolidating the balance sheets of the Treasury and the Fed. Now, where does the item "government bonds held by the Fed" appear on this synthesized financial statement? It appears, of course, on both the asset and liability sides of this balance sheet, since it is an asset of the Fed as well as a liability of the Treasury. Treasury securities which have been obtained by the Fed no longer represent a net financial liability of the government. This perspective lends further expression to the characterization of open-market purchases, the creation of money, as the effective retirement of outstanding government debt.

Thus, inflation constitutes a tax on the holding of real money balances — a tax which is levied at the rate at which the government inflates the nominal money supply. And like all taxes it transfers resources from the private sector to the public sector. Yet, when one considers the inflation "problem" in these terms, that is, in terms of a tax base, a tax rate and the revenue generated, further questions are raised. These questions must be addressed if one's understanding of the inflation tax is to be complete.

> **"Inflation weakens the private sector's ability to retain the use of available resources."**

The first of these questions concerns the status of the commercial banking industry during inflationary periods. Each dollar of monetary base injected into the banking system by the Fed results in the creation of new money in an amount greater than a dollar. The difference between the total expansion of the money supply and the amount of base money injected by the Fed represents the net deposit creation of the banking system. Does this not suggest, then, that despite the fact that the banking system cannot initiate expansion of the money supply, it nonetheless shares in the real revenue generated by the expansion? To see that shareholders in commercial banks are not beneficiaries of such revenue, it is necessary to consider the extent to which the banking industry remains competitive despite regulatory intervention.

In an unhampered market one would expect banks to use the explicit payment of interest on deposits as a competitive device. Bank markets, however, are hardly unhampered, particularly with regard to interest payments on deposits. The Banking Act of 1933 provides for the establishment of interest rate ceilings with regard to both demand and time deposits. The ceilings, although awaiting a 1986 final phase out, are presently enforced under Regulation Q of the Federal Reserve System charter.[4] Yet, competition stifled in one dimension can be relied on to surface in another. This is precisely what has happened. Competition has broken down the legally established cartel and resulted in wholesale circumvention of the ceilings.[5] Various vehicles are utilized for this purpose. The use of average compensating balance agreements, the rewarding of new depositors with gifts, and the banks absorption of expenses entailed in servicing deposits, should be viewed as implicit payment of interest in excess of the ceilings.

Here, however, a problem arises. If interest payment took only cash form, the depositor would put it to its most highly valued use. But the law precludes this. It effectively requires that payment in excess of the ceilings take non-cash form. And there is no assurance that the form which the payment takes is the form which the depositor prefers. There arises, then, a gap between interest *paid* by a bank and interest *received* by a depositor. This gap reflects resource wastage introduced by the regulations.

Is the size of this gap impervious to competitive forces? Clearly not. Recognizing depositor dissatisfaction with interest payment in non-cash form, banks have created unregulated deposits, deposits that fall beyond the periphery of the law. But this too has its price. The virtually incomprehensive maze — NOW accounts, Euro-dollar accounts, sweep accounts, ATS accounts, etc. — that has arisen in lieu of what surely would have been a straightforward menu of deposits, can be laid largely at the door of these deposit interest rate ceilings.

The second issue concerns potentially confused aspects of the redistributive nature of inflation. It is often remarked that inflation involves a redistribution of wealth away from creditors toward debtors. This redistribution is said to result from the private sector's inability to foresee the rate at which the government is going to inflate. One who 10 years ago obtained a 30-year mortgage at, say, 8% enjoys the benefits of receiving a portion of the wealth previously accumulated by the owners of the lending institution. Had the private sector been able to foresee the rate at which the government has inflated during the past 10 years, nominal interest rates would have adjusted to obviate this redistribution of wealth. This much is undeniably the case. However, one must take care not to infer from this that the redistribution from the private sector to the public sector — government inflation-tax revenue — also depends on the private sector being mistaken with regard to the rate of monetary expansion. Use of this tax scheme requires only that the private sector hold some amount of real money balances and that the government engage in monetary expansion. If these criteria are satisfied, both the tax base and the tax rate are positive, and the inflation tax provides the Treasury with revenue.

Like most tax schemes, the inflation tax involves a tax base which is negatively related to the rate at which it is taxed. An expected increase in the rate of monetary expansion renders the holding of money a more costly affair, and one expects the private sector to contract its real money holdings accordingly. Since the tax base declines in response to the increased tax rate, the impact upon inflation-tax revenue depends on which changes in the greater proportion. Typically, however, the contraction of real balances in response to an increased rate of monetary expansion transpires with a lag. During the interim inflation-tax revenues rise only to fall when the portfolio adjustment materializes. Having become accustomed to the increased tax take, a government may respond to this by once again increasing the growth rate of the money supply. This road is well traveled and leads directly to catastrophic rates of inflation.

The fact that the U.S. expertise with inflation pales in comparison with that of other countries in no way implies that the inflation tax is an inconsequential matter here. Economists at the Federal Reserve Bank of St. Louis estimate, for example, that a 5% expected rate of price increase generates about 5.1 billion 1976 dollars for the Treasury.[6] Moreover, the real value of the foregone services of money resulting from the private sector's contraction of its real money holdings, the so-called excess burden of the tax, is estimated to be 4-7 billion 1976 dollars. This amounts to 80-140 cents per dollar of government revenue. Revenues from the corporate income and personal income taxes in 1975, a year in which the expected rate of price increase is taken to be 5%, was 42.6 and 725.7 billion dollars, respectively, and involved an excess burden of about 3 cents per dollar of revenue.

> **"Like all other taxes inflation transfers resources from the private sector to the public sector."**

Recognition of the inflation tax bears strongly on one's view of the informative content of data on disposable income. These data suffer, as do all macro data, by virtue of their aggregative nature. Economics is a coordination problem, and little can be said about the whole if primary attention is not paid to the interaction of the pieces. Even if this is forgiven, however, problems remain. Disposable income is intended to indicate discretionary income actually received by households. Its calculation involves deducting from GNP the sum of gross business saving, business taxes, and personal income taxes less government transfer payments. To the extent that the government finances its activities through the creation of money, too little is deducted from GNP, and disposable income is correspondingly overstated.

Tax Incentives and the Public Sector

In an earlier *Policy Report*, Randall and I considered tax incentives promoting excessive production within the public sector.[7] Among these incentives, the tax-exempt status of state and local government securities is of particular interest when one considers the way inflation contributes to the decline in the position of the private sector relative to that of the public sector.

Recall the individual who requires at least a 4% real after-tax return in order to forego one unit of real consumption today and whose income is taxed at the rate of 20%. In order to provide such a return in a period of price stability, a corporate bond must yield 5% as compared with a 4% yield on a tax-exempt state or local government issue. If prices are expected to rise at a 5% rate, the before-tax corporate rate must rise to 11.25% in order to yield a 4% real return after taxes. The rate on tax-exempt bonds, however, need only rise to 9%. Expansive monetary policy therefore has a differential impact upon corporate and lower-level government rates, which in this case increases the gap between them from 1 to 2.25 percentage points. Such a policy, then, exacerbates incentives which encourage the use of resources in the public sector.

It might be argued that since inflation and historically based depreciation interact to adversely affect the financial position of borrowing firms, one should not expect interest rates to rise to a level which maintains real after-tax rates received by lenders. Even so, inflation weakens the private sector's ability to retain the use of available resources.

Suppose that in an environment of price stability a firm borrows $100 at 5% interest in order to finance the purchase of a machine expected to last one year. The firm must have available $105

(Cont. on p. 10)

Inflation's Aftermath (Cont. from p. 9)

if it is to meet its year-end obligation to creditors. The governmental unit which issues bonds paying tax-free interest requires only $104. When prices are expected to rise at a 5% rate, the firm which just satisfies this minimal requirement anticipates $110.25 in revenue; it can pay no more than 10.25% interest without treading on its owner's wealth. A creditor taxed at a 20% rate translates this 10.25% nominal rate into a 3.2% real after-tax rate when prices are expected to rise by 5% per year. In order to provide the same 3.2% real after-tax return, the governmental unit need pay only 8.2%. Even if the rate paid by corporate borrowers rises only to the lower limit of its conceivable range, the gap between private and governmental rates widens to 2.05 percentage points.[8]

Concluding Remarks: Toward Terminological Clarity

At long last a consensus has emerged which regards the termination of inflation as imperative. The mythology of much of the post-war literature, which portrays inflation as a benign force, now lies shattered. Yet within political circles the apparently endless debate concerning the design of effective anti-inflation policy continues. The use of meaningful language would go far in relieving these debates of the confusion from which they suffer.

I have used the term "inflation" to refer to the governmental policy of inflating the money supply. An increased general level of prices and the allocative distortions discussed in this paper are consequences of such a policy. This usage has much to recommend it, for it necessitates that a meaningful distinction be drawn between cause and effect. The more common use of the term "inflation," that is, a reference to the effect on prices of expansive monetary policy, vitiates such a distinction. Worse still, it invites proposals of spurious — indeed often dangerous — remedies for the inflation "problem." The great inflations of history serve as reminders of the exorbitant price one may eventually pay for the mistaken notions which follow from the use of imprecise language. ■

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[1]For such a description see R. E. Wagner, "Inflation, Recession and Macroeconomic Policy," *Policy Report*, August 1979.

[2]A similar exercise is performed by J. A. Tatom and J. E. Turley in "Inflation and Taxes: Disincentives for Capital Formation," *Federal Reserve Bank of St. Louis Review*, January 1978. They, however, do not focus on the net present value investment criterion.

[3]The Accelerated Cost Recovery System comprises sections 201-209 of the Economic Recovery Tax Act of 1981, Public Law 97-34.

[4]For a description of this and other provisions of the Deregulation and Monetary Control Act of 1980 see J. R. Hummel, "The Deregulation and Monetary Control Act of 1980," *Policy Report*, December 1980.

[5]For an account of the extent to which this circumvention has transpired see R. L. Greenfield and U. Yaari, "Deposit Interest Ceilings and the Cost of Bank Borrowing," *Eastern Economic Journal*, April 1980.

[6]See J. A. Tatom, "The Welfare Cost of Inflation," *Federal Reserve Bank of St. Louis Review*, July 1976. Tatom mistakenly computes the deadweight loss per dollar of government revenue as 80-120 cents. I have corrected his error.

[7]See R. L. Greenfield and M. R. Randall, "Tax Incentives and the Public Sector," *Policy Report*, March 1981.

[8]This point is due in part to M. Randall.

PR *Reviews*

The Reagan Experiment, edited by John L. Palmer and Isabel V. Sawhill. Urban Institute Press, Washington, D.C., 1982. 530 pp. $12.95.

This book, the first comprehensive nonpartisan examination of the economic and social policies of the Reagan administration, is part of an ongoing multimillion-dollar research project. This project is designed to chart the new course the United States is taking and outline its implications for the future. Of course, such a project assumes that America *is* on a new course — an assumption at least implied throughout the book. A special issue of the Urban Institute's *Policy and Research Report* notes that "What was not expected was how fast and how far he (President Reagan) would attempt to alter the course of federal policy. A counterrevolution is under way...The nucleus of this counterrevolution is a philosophy of more limited government."

The Reagan Experiment examines the Reagan's administration's budget, tax, and regulatory policies as well as social services, education, income security, housing, transportation, health, employment, and the regional, state, and local impacts.

While the contributors to *The Reagan Experiment* have written thorough and thoughtful chapters, the book understates the element of continuity between this and previous administrations.

Indeed, U.N. Ambassador Jeane Kirkpatrick recently refuted the contention that the administration has brought about radical change, arguing, "We have achieved no miracles because we are not miracle-makers, conducted no revolutions because we are not revolutionaries."

To the extent that Reagan has deviated from historical precedent it has often been in the direction of *increasing* state activity. For instance, the massive deficits resulting from the Reagan budget do not receive sufficient attention. If off-budget items are included, this deficit far exceeds $200 billion — a significant precedent. Nowhere is it mentioned that the on-budget borrowing alone will swallow up nearly two-thirds of all capital on the loan market. Other points given short shift are Reagan's unwillingness to dismantle the Departments of Energy and Education and his re-regulation of the transportation sector.

The analysis also fails to take into account the massive reallocation of resources that is resulting from Reagan's defense budgets. An unprecedented $1.6 trillion is being spent over five years. To top it all off is Reagan's $98.9 billion tax hike — the largest in U.S. peacetime history. Although the hike was too recent to be included in this book, it does suggest that the thesis of *The Reagan Experiment* needs serious revision.

Social Security: Averting the Crisis, by Peter J. Ferrara. Cato Institute, Washington, D.C., 1982. 156 pp.

Building on the argument in his highly acclaimed 1980 book *Social Security: The Inherent Contradiction*, Peter Ferrara once again demonstrates the fundamental problem of the social security system — the attempt to combine welfare and insurance objectives in the same system.

An insurance program pays benefits to people upon the occurrence of certain events, and generally in some proportion to what they have paid in. Social security serves this function by paying benefits to individuals upon retirement, disability, death, or hospitalization. In general, the benefits are based upon the individual's contribution and are paid regardless of need.

A welfare program pays benefits to people based on need, regardless of how much the individual has contributed in the past. Social security incorporates this function by paying benefits to some individuals solely on the basis of need and by denying earned benefits to some individuals because they are not in need.

Because of this inherent incompatibility, and especially because of the political nature of the program, social security has operated on a pay-as-you-go basis, paying current recipients out of current revenues rather than investing tax payments in a trust fund. The so-called social security trust fund now contains less than three months' worth of benefits.

Besides this fundamental problem, Ferrara offers a number of other criticisms of the existing social security program. Econometric studies show that social security is costing Americans hundreds of billions of dollars annually because of its effect on savings and capital formation.

Ferrara demonstrates that such alternatives as raising taxes, reducing benefits, or raising the retirement age will not prevent the system's imminent bankruptcy. Instead, a fundamental reform is needed.

His proposal would allow younger workers (up to about age 40) to withdraw from the system entirely and invest in their own tax-free retirement accounts, essentially the same as today's IRA's except that the individual could invest up to the full amount of both the employee's and the employer's portion of social security tax. Workers from 40 to 65 would stop paying taxes and begin investing in IRA's, but they would be guaranteed a payment from the government sufficient to make up the difference between their IRA earnings and what social security would have paid them. Current recipients would continue to receive their benefits out of general revenues. This would, of course, require a substantial budget cut or a gradual phase-in to cover the initial loss of tax revenues.

Ferrara argues that his program would prevent the economic and social catastrophe of a social security collapse, provide a much-needed injection of capital into the economy, and give American workers the freedom to choose the retirement plan that best suits them.

Understanding Reaganomics. Heritage Foundation, Washington, D.C., 1982. 64 pp. $4.00.

This collection of essays by Heritage Foundation economists Thomas Humbert and Peter Germanis (with the assistance of David Raboy of the Institute for Research on the Economics of Taxation) is designed primarily to provide pointers for defenders of President Reagan's economic program. It includes 36 pages of very useful charts on such subjects as budget outlays as percent of GNP, personal saving rate, inflation, tax rate reduction, money supply, and interest rates.

The essays, generally only about 1,000 words each, deal with issues like supply-side economics, deficit reduction, the effects of deficits, budget cuts and the needy, monetary reform, and the recession. Clearly one of the primary goals behind the publication was to counter the growing demand for tax increases or delaying the third installment of the tax rate cut. Thus Germanis writes that a tax increase to reduce the deficit "would lead to economic stagnation" and that Congress should instead "reassert control over poorly conceived government programs." And Humbert writes that large deficits are the result not of the tax rate reduction but of the recession's impact on government revenues and spending as well as the high interest rates brought about by erratic monetary policy.

Unfortunately, the authors' desire to defend the Reagan program occasionally gets in the way of sound analysis. One essay, "Have Budget Cuts Hurt the Needy?," seems to boast that the federal government will subsidize 95 million meals a day and health care for 20% of the population. It argues that "this nation has committed enormous resources, energy, and thinking to fighting poverty" rather than challenging the idea that transfer payments are an effective way to fight poverty. Another essay argues that it is social spending rather than military spending that hurts the economy; objectively, it would seem that the taxpayer and the investor do not assess where the money is going but simply how much is being taken by the government in making their decisions about work, saving, and investment.

Most egregiously, an essay entitled "Have the Financial Markets Lost Confidence in Reaganomics?" cites three factors — erratic monetary policy, still-high tax rates, and the prospect of future tax cuts — as responsible for the poor performance last spring of the financial markets. The word "deficit" — surely a major concern of Wall Street — does not appear in the essay.

Nevertheless, the information contained in the charts, and the arguments made by the authors, make this a valuable handbook on our current economic situation and the Reagan program. ■

"To be governed . . ."

Balancing the budget

OMB Director David A. Stockman chartered a military jetliner to Baton Rouge, La., in April, 1981, at a cost to American taxpayers of $3,945. His written request stated that "commercial air travel is neither available, readily convenient or satisfactorily capable of performing the requirements of this mission." The mission: a speech to the 6th Congressional District Business Advisory Committee.

—*Washington Post,* August 10, 1982

Business as usual

Before the Federal Reserve Board reduced its discount rate, at least two top White House aids bluntly told Chairman Paul Volcker that President Reagan wanted to see faster expansion of the money supply to cut interest rates and boost economic recovery before Election Day.

—*U.S. News & World Report,* August 2, 1982

Working people—the enemies of socialism

Polish officials braced for a new wave of unrest as they announced raids on two underground Solidarity offices and threatened an "unequivocal, tough and determined" response to "enemies of socialism." About 1,000 people reportedly demonstrated after the funeral of two relatives of Solidarity leader Marian Jurczyk.

—*Wall Street Journal,* August 13, 1982

Monkey business

The "continuing resolution" that Congress must pass by midnight Thursday to carry the government through the first few months of the new fiscal year is supposed to cover just bare essentials....

But each senator has his own definition of essential, which in the case of Sen. Harrison H. Schmitt (R.-N.M.) is broad enough to include $500,000 for a "chimpanzee colony" (pop. 60) at New Mexico State University.

—*Washington Post,* September 29, 1982

If at first you don't succeed go to court

Both McDonald's and its co-competitor Wendy's have decided to settle the matter [of Burger King's comparison ads] the American way — they're going to court. In separate lawsuits, the two firms are asking federal courts to order Burger King to cease and desist with its advertising campaign and open its consumer taste-test data to inspection.

—*Washington Post,* October 6, 1982

The democratic process

Two years of pent-up legislation spilled out of the 97th Congress in a cranky, chaotic 16-hour marathon that ended at 2:33 a.m. yesterday....

In the last day's roller-coaster ride, the Senate passed about 150 bills, and the House about 50, including a multibillion-dollar stopgap funding bill for federal agencies....Many of the bills whizzed through on voice votes in a matter of seconds, with barely a mumbled mention of the title....

By the time the mixup was solved about 2 a.m., most members had gone home to bed. But the defense bill passed on voice votes. Of 435 House members, only a sleepy-eyed [Thomas] Foley and freshman Republican Joe Skeen of New Mexico could be seen on the floor.

—*Washington Post,* October 3, 1982

Remember: government spending doesn't create jobs, except...

"You know, when I see them [the demonstrators], I wonder why they haven't realized that a nuclear freeze would cancel the development of the B1 bomber," [Reagan] said.

Later, he told the story again and pointedly reminded listeners that scrapping the bomber would cost 7,000 jobs in Ohio.

—*Washington Post,* October 5, 1982

Defending free enterprise

The nationalization yesterday of Mexico's private banks was decreed by the Government to save them from insolvency, according to bankers in the United States.

Despite their philosophical commitment to private ownership, most American bankers applauded the nationalization as a much needed step to bolster international confidence in the Mexican banking system.

—*New York Times,* September 2, 1982

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