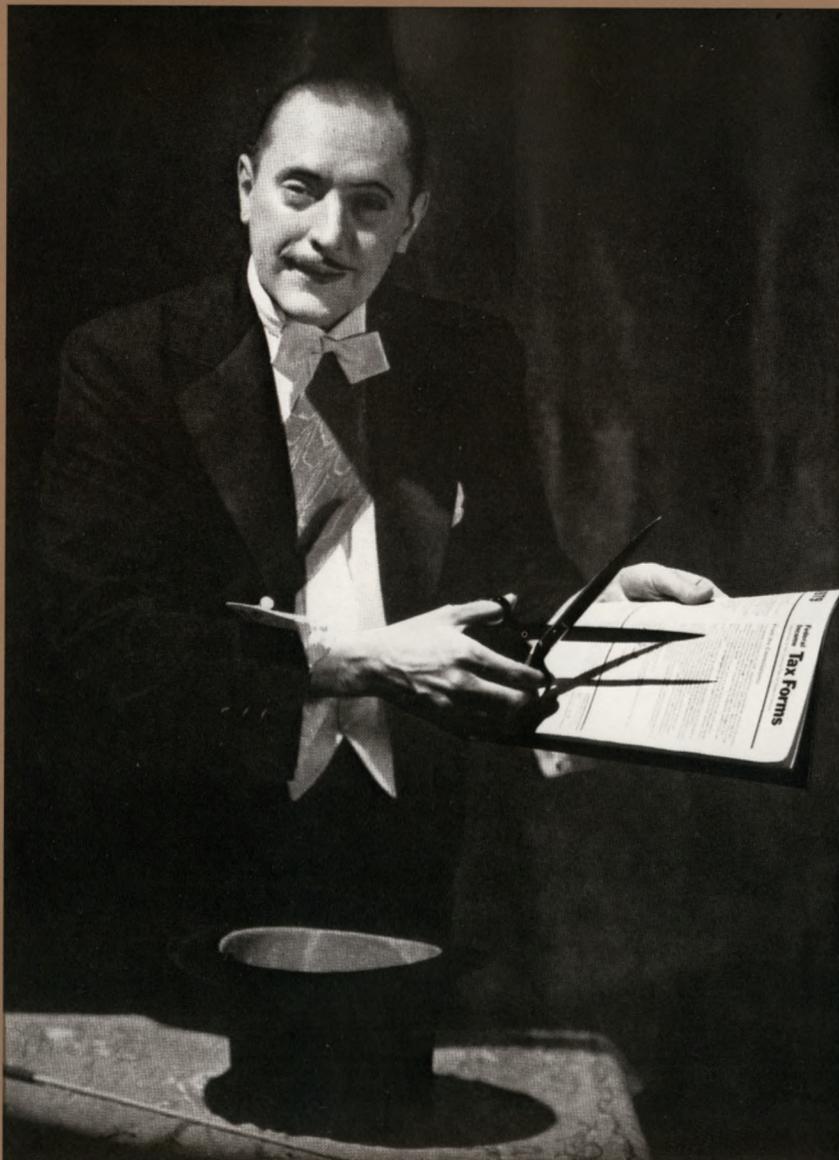


# THE TAX-CUT ILLUSION





# THE TAX-CUT ILLUSION

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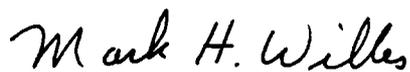
## *About This Issue*

During 1979 the Federal Reserve System tried to slow the growth of money, and in 1980 it has renewed its commitment to this task. Slowing the growth of money is a necessary step for fighting inflation, but as our 1978 *Annual Report* explained, the Fed cannot do the job of fighting inflation by itself. Monetary policy must be supported by appropriate fiscal policy.

The lead article in this year's *Annual Report* discusses one aspect of fiscal policy that has often appeared in the news in recent months: the possibility of cutting taxes. Although a real tax cut would be appealing, this is not an option that the proponents of cutting taxes usually present. In fact, most of the tax cuts that are usually offered would result in higher budget deficits and higher inflation. This amounts to replacing direct taxes with an inflation tax. If fighting inflation is vital and urgent, as we strongly believe, then such tax cuts would be a step backwards.

Of course, if federal government expenditures were reduced along with taxes, budget deficits and inflation would not necessarily be pushed higher. In this case, we would have a real cut in taxes — which could well be good for the economy. Unfortunately, a substantial cut in government expenditures seems very elusive.

In the second part of this report, the Minneapolis Federal Reserve Bank's success in lowering unit costs and raising productivity is documented. Although it may not greatly affect inflation, we are extremely pleased to report this performance. It is noteworthy that the Bank was able to cut its unit costs significantly in spite of high inflation.



Mark H. Willes  
President  
Federal Reserve Bank of Minneapolis



# THE TAX-CUT ILLUSION

A tax cut is often touted as the magical solution to our economic problems, but a tax cut is not always what it seems. Most proposals for cutting taxes would not reduce government expenditures one bit. They are like the magician's trick of sawing in half the lady in the box. There is a great deal of hoopla while something appears to be cut, but when it is all over, nothing much has changed.

In fact, most of the commonly heard proposals for cutting taxes would not lower the real tax burden—they would probably increase it. A reduction in taxes without a corresponding reduction in government expenditures would merely increase our reliance on deficit spending. This would cause further inflation and make our economic performance deteriorate. Because of these hidden costs, a tax cut could easily be concealing an increase in the real tax burden.

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## *The Real Tax Burden*

The *real tax burden* is the amount of resources—goods and services—that the government removes from the private sector. Government expenditures account for the major part of the real tax burden. When the government spends for investment, transfer programs, consumption, or anything else, it buys labor, expertise, raw materials, land, buildings, and so forth. Since all these resources are in limited supply, the private sector must give them up when the government buys them. The real tax burden is not what the Internal Revenue Service collects; it is what the private sector gives up to government.

A smaller, but still significant, part of the real tax burden consists of the resources that are consumed incidentally because of the government's taxation policy. These resources are removed from the private sector but never go to any government purpose. They are simply lost—not because of ineptness or corruption, but because every tax causes some resources to be wasted. These lost resources, sometimes called *deadweight loss*, include collection costs: the legislative time devoted to tax laws, the expenses of tax courts, and the costs of running the IRS. They also include the productive time or material that is wasted as individuals, legally and illegally, try to minimize their taxes. Together, these lost resources and government expenditures compose the real tax burden.

Most of the proposals for cutting taxes would not reduce the real tax burden, despite the claims of the newly popular supply-side theories. They would reduce neither expenditures nor the amount of wasted resources. They would merely reduce tax revenues—but reducing tax revenues does not mean that government hires fewer people, buys fewer buildings, or owns and controls fewer resources of any other kind. In fact, it could easily mean that government owns and controls the same resources and runs larger budget deficits.

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## *Deficits and Inflation*

Because most proposals for tax cuts are not coupled with any reduction in government expenditures or deadweight loss, they would have to increase the federal

## Increasing federal debt is a way to conceal taxes, not a way to reduce them . . .

budget deficit. In effect, they would replace explicit taxes like the income tax with greater deficits.

A shift from explicit taxes to deficits does not lower the real tax burden, whatever else it may do. Increasing federal debt is a way to conceal taxes, not a way to reduce them. If the accumulated debt is going to be paid off in the future, a shift to deficits could indeed postpone taxes for a while. But the taxes must eventually be paid back with interest.

If, on the contrary, the accumulated debt is *not* going to be paid off in the future, then a shift to deficits merely makes taxes less visible. Currently, it seems safe to assume that the United States government will not pay off its debt. Since the 1960s it has not done so, and it appears to have no intention of doing so. Congress and the administration have sought to balance the budget only when there is full employment, only at the peaks of the business cycle. They are clearly saying that the budget on average will be in deficit. The longer they follow this policy, the greater the total federal debt will be.

When the federal government runs a deficit, it simply prints and sells more bonds. Federal bonds are nothing more than an alternative form of currency — they are promises to deliver currency in the future. Like currency, these bonds are pieces of paper backed by nothing tangible; they are fiat paper. Like currency, they are a debt that the government never promises to retire. They are, in all essentials, a part of our ever-expanding money supply. When the government has no intention of retiring its debt, there is little difference between currency and bonds; both are money.

In this circumstance, any increase in the deficit is an inflation tax. As is well understood, government can cause inflation by printing more money. When more paper is pursuing the same amount of goods, it takes more paper to buy each good. The value of the paper declines; the price of goods goes up. Obviously, this is inflation.

What is not often acknowledged, though, is that this is also a tax. When the government prints more paper, the government benefits and the private sector pays. Government can print paper for virtually nothing and use it to pay consultants' salaries, to construct buildings, or

to acquire other real resources from the private sector. The private sector then has more paper and fewer goods. By printing paper, government is able to obtain a larger share of the available goods, just as if it were taxing its citizens more. An increase in federal paper — currency or bonds — is thus really an inflation tax.

The data support the contention that deficits are a means of levying an inflation tax. In recent years, higher inflation has accompanied higher deficits. The accumulated federal budget deficit (the stock of interest-bearing and noninterest-bearing federal government debt) has expanded much faster in the 1970s than in the 1960s. In the 1960s, when the deficit grew slowly, the rate of inflation was very moderate, as Figure 1 shows. In the more debt-burdened 1970s, in contrast, inflation averaged about 7 percent per year.

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### *Some Excuses for Deficits*

The total federal debt has been increasing; this is the indisputable consequence of our repeated annual deficits. Some economists, however, claim that the increase in federal deficits cannot explain the increase in inflation. They have two main lines of argument to explain why deficits in the 1970s have not been large enough to cause inflation to accelerate. Both of their arguments are off the mark.

They claim, first, that federal deficits are partly offset by state and local government surpluses. On the surface this claim may look plausible, because surpluses and deficits are simply opposite sides of the same thing. A deficit adds to the amount of bonds a particular government has issued; a surplus lowers the amount. But federal deficits cannot simply be added to state and local surpluses. They are not equivalent, and adding them is like adding apples and oranges.

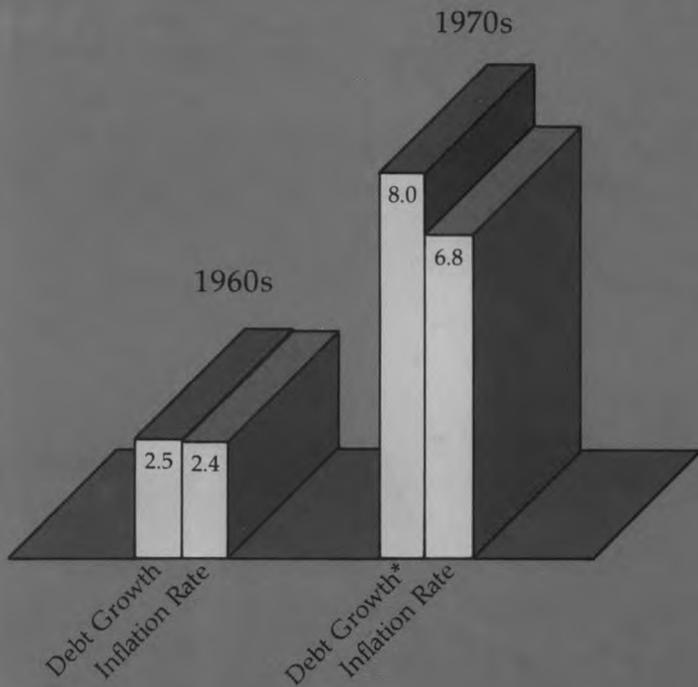
Deficits from state and local governments are fundamentally different from those from the federal government. Unlike the federal government, state and local governments back their bonds with the promise to tax people. They must repay their debts or go into bank-

When the government prints more fiat paper,  
the government benefits and the private sector pays . . .

Figure 1

Higher inflation has accompanied higher deficits —

Average Annual Growth (%) in Federal Government Debt  
and the Consumer Price Index in the Last Two Decades



\*Not including December 1979.

Sources: Federal Reserve Board of Governors,  
U.S. Departments of Commerce and Labor

ruptcy. Because their bonds are backed, they have no effect on the amount of unbacked debt — fiat paper — in circulation. This means that they have nothing to do with inflation, for only fiat paper causes inflation.

The surpluses of state and local governments are also quite unlike those of the federal government. State and local surpluses simply reduce the amount of backed bonds. They do not reduce federal debt. They do not reduce the amount of fiat paper in circulation. They do not

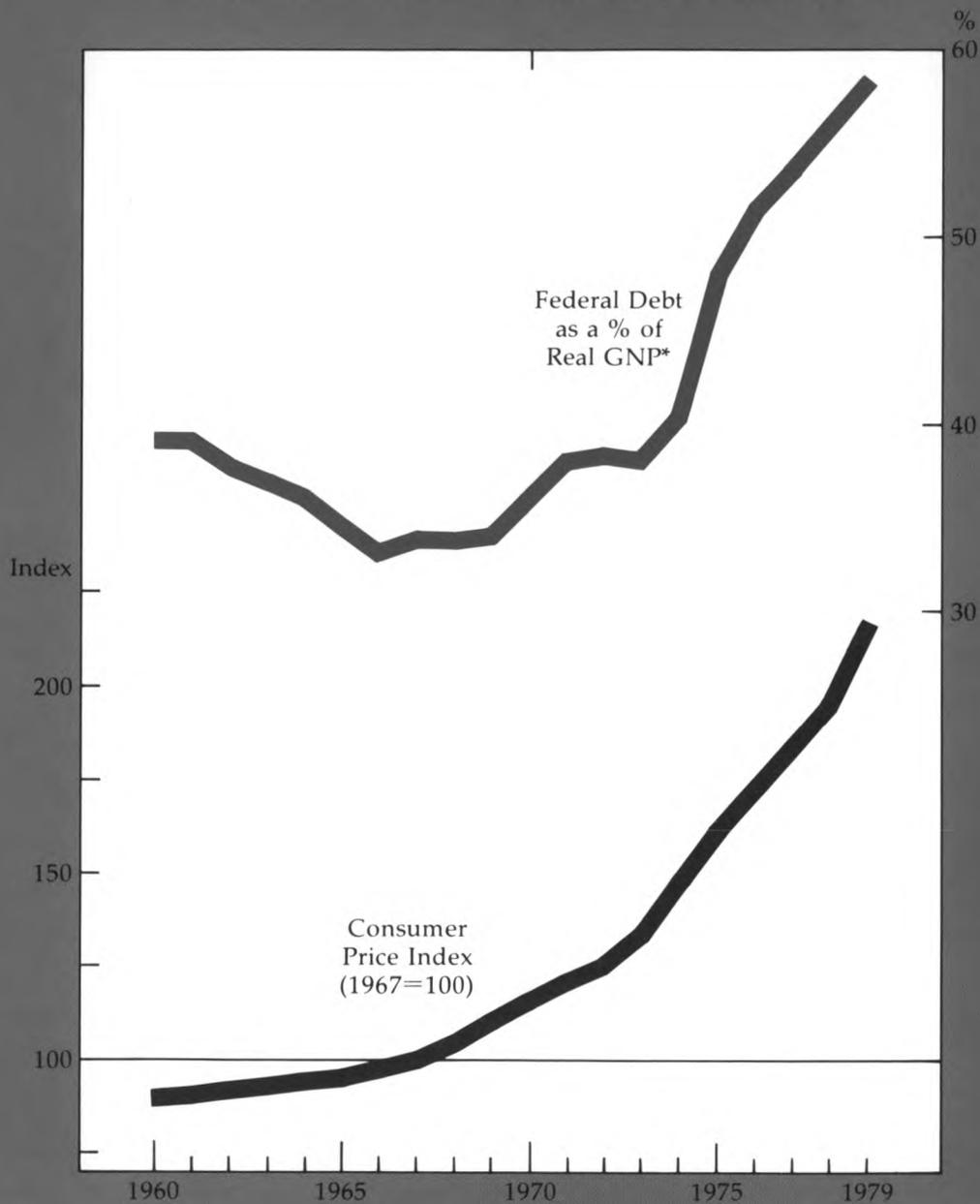
reduce the money supply. And they do not reduce citizens' tax obligations to the federal government. Adding today's federal deficit to state and local surpluses, like adding apples to oranges, does not make sense; it makes fruit cocktail.

The second argument that some economists use to explain why federal deficits have not been growing fast enough to cause an increase in inflation is that federal deficits have not grown in relation to the size of the economy. More specifically, they claim that when the accumulated federal debt is computed as a percentage of the gross national product, it has actually declined in the 1970s. Therefore, they argue, deficits can't explain the higher inflation rates of the 1970s.

Their calculation, however, is meaningless. They mistakenly use the figures for nominal GNP to represent the size of the economy, figures that include the effects of inflation. *Nominal GNP* is equal to the price level multiplied by real GNP, the amount of goods and services that the country produces. As a result, nominal GNP can increase merely because of inflation. Real GNP, in contrast, can increase only when people work more, when firms invest more, or when productivity increases. To determine if deficits are large in relation to the size of the economy, it is necessary to use figures for real GNP, figures that are not adulterated by inflation.

To see why it is meaningless to calculate federal debt as a percentage of nominal GNP, consider what happens to this percentage under an extreme assumption: that federal debt is the sole cause of inflation. Under this assumption, suppose that federal debt doubles during a certain period. What happens? The price level doubles, which is to say the rate of inflation is 100 percent. Nominal GNP likewise doubles, supposing that output remains the same. But despite the rapid rate of inflation, federal debt as a percentage of nominal GNP remains exactly the same as it was, because both figures have simply doubled. The conclusion is inescapable: Computing federal debt as a percentage of nominal GNP is irrelevant for determining if debt growth causes inflation. Even if debt growth were the sole cause of inflation, this computation could not detect it.

Figure 2  
— even when the scale of the economy is considered



\*Not including December 1979.

Sources: Federal Reserve Board of Governors, U.S. Departments of Commerce and Labor

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Inflation is never neutral.  
It is a real tax that lowers real output,  
even when it is fully anticipated . . .

To compare the size of the federal debt with the size of the economy, the economy must be represented by the quantity of real goods that the country produces. That is, real GNP, not nominal GNP, is the relevant measure. When the amount of federal debt is computed as a percentage of real GNP, the claim that increases in federal debt are closely related to inflation cannot be easily dismissed. (See Figure 2.) From 1959 to 1969, when inflation was low, federal government debt as a percentage of real GNP dropped slightly. From 1969 to 1978, when inflation was high, it nearly doubled. Even when the scale of the economy is considered, federal debt in the inflationary decade of the 1970s has grown more rapidly than in the relatively stable 1960s.

A tax cut that reduces revenues and increases deficits, therefore, would merely substitute the inflation tax for explicit taxes. It would not lower the amount taxpayers relinquish to the government.

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### *The Costs of Inflation*

Why, then, has the inflation tax been used so extensively? Congress has apparently found it easier to legislate inflation than to increase direct taxes, because many prominent economic models erroneously imply that inflation isn't a serious hardship. In these models, inflation has no economic costs—it does not reduce output. Although most economists would agree that a highly unpredictable rate of inflation makes planning more hit-and-miss and increases the odds of making damaging economic decisions, their models typically do not reveal these costs. In most models, in fact, inflation is neutral, its costs negligible.

Keynesian models, for instance, imply not only that inflation is costless, but that it has tremendous benefits. In these models it is possible to raise output and employment indefinitely simply by raising inflation. On average, in Keynesian models, inflation makes the economy perform better. Monetarist models also imply that the cost of inflation is low, although not as low as in Keynesian models. In monetarist models the cost of inflation is zero,

because higher prices have no effect on real output. When inflation is fully anticipated, wages, incomes, prices, and interest rates all go up in unison and no one is really harmed. When inflation is not anticipated, it causes some redistribution of income from creditors to debtors, but one person's losses are balanced by another's gains, so the economy as a whole is unaffected. In these models, that is, inflation produces no deadweight loss—no wasted resources of any sort.

But inflation is never neutral. It is a real tax that lowers real output, even when it is fully anticipated.

The inflation tax lowers output—or, in other words, lowers real income—because it produces a high deadweight loss. Inflation gives people incentives to use their time and physical goods in less productive ways. It encourages them to use their resources in ways they wouldn't dream of if more explicit taxes replaced the inflation tax.

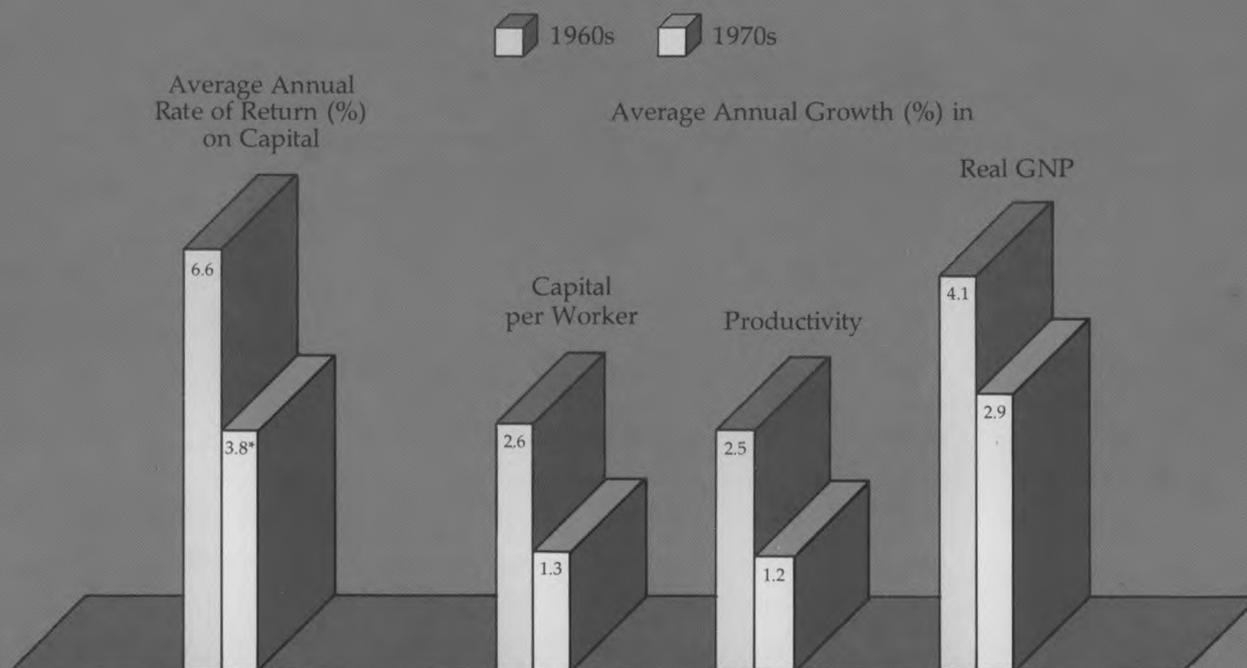
It does this by making money less desirable as a means of exchange and a store of value. Inflation can be defined as the rate of increase in the price level or as the rate of decline in the value of each unit of fiat paper. By either definition, when inflation accelerates, the real rate of return on currency and outstanding federal bonds falls. This begins a chain reaction. When the rate of return on money falls, more real resources—physical goods that would otherwise be used to produce something—are devoted to cash management techniques. A lot of labor, computers, and office space, for instance, are now being used to allow individuals to substitute interest-bearing assets for idle cash.

When resources are diverted to nonproductive uses—when a steel company finds it necessary to hire someone to minimize its cash holdings instead of someone who produces steel—the rates of return on capital should fall. Sure enough, they have fallen as deficits have increased and inflation has accelerated in the 1970s. Although individuals find it in their own best interests to hold less money when inflation rises, substituting productive capital for money is wasteful for the economy as a whole.

A lower return on capital is not the only problem related to deficit financing and the subsequent inflation

Most of the frequently proposed tax cuts are misleading and potentially harmful . . .

Figure 3  
Lower returns and slower growth in the inflationary '70s



\*1970-78

Sources: Federal Reserve Board of Governors, U.S. Departments of Commerce and Labor

tax, as Figure 3 shows. As the return on capital has fallen, business has become more reluctant to add to its capital stock. Because of this, workers have been forced to work with less capital than they otherwise would — they use fewer or older machines, for example. As a result, they have not produced as much as they could have. Thus, productivity and total output have both grown more slowly than they would have. The data, in short, are consistent with the view that the greater inflation taxes of the 1970s have caused a decline in the real rate of return on capital, a decline in the rate of capital accumulation, a decline in productivity growth, and a decline in overall economic growth.

Some of this slower growth might be blamed on greater

uncertainty about inflation or government policy. However, even if this uncertainty could be eliminated, inflation would still have large costs. The inflation tax has been allowed to become very high and do a lot of damage to the economy.\*

\*Some have argued that the deterioration in economic performance in the 1970s is due to higher energy prices. But even when the rise in the relative price of energy was modest, as it was from 1970 to 1978, economic performance was hardly exemplary. Over this period the energy subindex of the consumer price index rose at an average annual rate of 8.7 percent — only modestly faster than the total CPI, which rose at an average annual rate of 6.6 percent. When the period from 1970 to 1978 is compared to the 1960s, the economic performance of the 1970s still looks poor. It is doubtful, then, that energy prices can explain the deterioration of economic performance in the 1970s.

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If policymakers were made aware  
of the uncertainty surrounding economic forecasts,  
they would have to be much more cautious . . .

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### *Popular Tax-Cut Proposals*

Most of the frequently proposed tax cuts amount to using explicit taxes less and the inflation tax more, since they would almost certainly lower tax revenues and increase deficits. They are thus misleading and potentially harmful.

One type of tax cut that has been proposed with slight variations over the last several years is *the antirecession tax cut*. It is designed to lower tax rates in general so that tax revenues fall. Its advocates admit that it would increase inflation, but they claim that the cost of the extra inflation would be trivial compared to the benefits. As prices rise, their argument goes, workers on inflexible contracts could not receive compensating raises so that their real, or inflation-adjusted, wages would fall. Because of the lower real wages, employers would demand more labor and output would increase. The supposed result of the antirecession tax cut, then, is a slight increase in inflation and substantially more employment and output.

This kind of reasoning got us into the economic swamp we're in now. It is wrong for at least three reasons.

First, it is wrong because it assumes that people can be repeatedly fooled by a policy of cutting taxes whenever an economic downturn appears. It assumes not that people make random errors in guessing about the economic future, but that they make systematic errors that government policy can exploit to make them better off in spite of themselves. This assumption is not well founded. The best current theories suggest that people cannot be so easily fooled and that government is not so omnipotent. When employers and employees are concerned about real wages and both foresee an increase in prices, then nominal wages rise. This offsets the price increases and keeps employment and output from rising.

The reasoning behind the antirecession tax cut is wrong, secondly, because it relies on only half of what the advocates' economic models predict. Advocates of this kind of tax cut emphasize that it could produce some temporary gain in employment or output, but they ignore another prediction from the same models: the prediction

that this gain will soon be completely wiped out. After a few years, we will be left only with higher inflation. The advocates say "buy now" and forget to mention "pay later."

The reasoning of the advocates of the antirecession tax cut is wrong, thirdly, because it ignores the uncertainty of their models. When the advocates announce that their models predict, say, -1 percent real growth for the year ahead, they fail to note that the models really predict a range of economic outcomes. With reasonable confidence they can say only that economic growth will turn out to be between something like -5 percent and +3 percent, a range so wide as to be of little value for determining the impact of a tax cut. So when economists forecast, for example, that a \$25 billion tax cut will add 1 percentage point to real growth, the implied certainty of their forecast is ludicrous. If policymakers were made aware of the uncertainty surrounding economic forecasts, they would have to be much more cautious about recommending an antirecession tax cut.

The most basic problem with the antirecession tax cut, though, is the familiar one. It would create higher inflation, and inflation is not free. Such a tax cut would be costly.

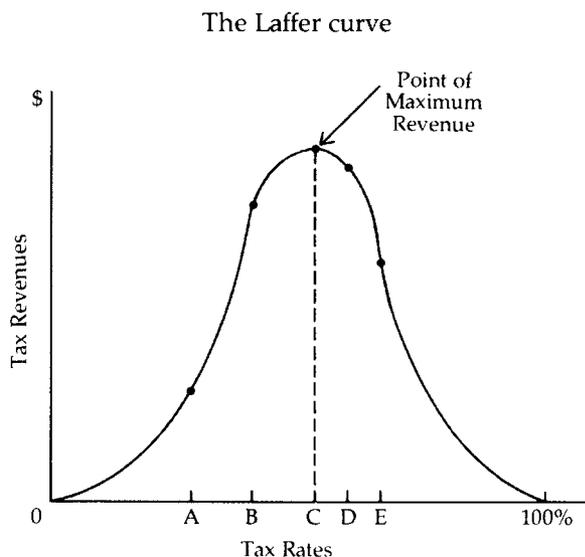
Another common proposal for a tax cut is *the incentive tax cut*. It is designed to lower a specific tax rate, such as the payroll tax rate or the business tax rate, in order to provide incentives for individuals to produce more or invest more. Incentive tax cuts, however, would quickly cause larger deficits and more inflation. This would probably take away more incentives than it would provide. Lowering a specific tax rate would lower the deadweight loss caused by that specific tax — the amount of legislative time, lawyers' fees, office space, and other resources consumed by that tax. But it would simultaneously increase the deadweight loss caused by inflation — the erosion of people's savings, the weakening of bond markets, the obstacles to establishing long-term contracts, and so on. The incentives provided by the right hand would be taken away by the left, and with a vengeance.

Some economists and editorialists contend that tax rates can be cut without losing tax revenues. It is much

## The Uncertainties of the Laffer Effect

The one hope that a cut in tax rates will increase tax revenues is the "Laffer effect," but this is a slim hope at best. It depends on the assumption that people will work significantly more when their after-tax wages rise or that they will invest significantly more when their after-tax profit or rate of return rises.

The presumed relationship of tax rates and tax revenues for a particular tax, like the payroll tax or the business tax, is shown in the chart below. As this chart indicates, when tax rates fall to zero, revenue falls to zero. When tax rates rise to 100 percent, revenue also falls to zero, because people have no incentive to work. Between these two extremes lies the tax rate that will produce the maximum revenue for this particular tax, rate C. No one knows what this rate is. It could be close to the middle or close to one of the extremes. Furthermore, no one knows the shape of the curve. It could have irregularities that do not appear on this simple chart.



The Laffer effect depends on two conditions which are highly uncertain and unlikely. First, for any given tax, the current tax rate must be beyond the point of maximum revenue — that is, the tax rate must be higher than rate C. If tax rates were cut from E to D, for instance, revenues would rise. However, since no one knows where the point of maximum revenue is, no one can be sure that the Laffer effect will occur. If the tax rate were below rate C, a cut in rates would not raise revenues. If rates were cut from B to A, for example, tax revenues would fall.

The second crucial condition that must be met for the Laffer effect to work is that the tax cut must not be too large. Even if we assume that the tax rate is above rate C, the Laffer effect won't work unless it is cut just enough to bring revenues closer to the point of maximum revenue, but not much beyond it. Lowering tax rates from E to D or from D to C, for example, would increase revenues. But lowering them from D to B would make revenues fall. Since no one knows the shape of the curve or the location of the point of maximum revenue, it would be very difficult to cut tax rates correctly. Perhaps just a small change in rates would carry us all the way from E to A.

If the tax rate is now higher than the point of maximum revenue and if the rate were cut just the right amount, the Laffer effect would work — lower tax rates would produce higher tax revenues. Both conditions, though, are extremely uncertain.

Worse, they seem very unlikely, judging from what little evidence is available. For the payroll tax cut to succeed, people must work significantly more when their real after-tax wages rise, because only then could a cut in tax rates fail to reduce tax revenues. If payroll taxes were assessed at a lower rate and people worked the same amount or less, tax revenues obviously would fall. Recent data, in fact, suggest that people do *not* work more when their real after-tax wages rise. If any generalizations can be made, people seem to work less and enjoy more leisure when their real wages rise. In recent years, at least, when real wages have gone up, people have worked less.

Similarly, for the business tax cut to raise tax revenues, firms must invest significantly more when their real after-tax return rises and output must increase significantly in response to the added investment. Output must increase enough so that the initial decrease in taxes is offset. For example, if a tax on business output is lowered from 50 to 45 percent, then output would have to increase more than 10 percent to make up for lost tax revenues. But even the proponents of the business tax cut concede that an increase in tax revenues is highly unlikely. They admit that tax revenues would probably drop.

Since there is a good chance that a cut in tax rates would ultimately lower tax revenues, experimenting with such a cut would be to risk making our high inflation rates even higher and our large budget deficits even larger. The uncertainties of the Laffer effect seem far too great to justify such a risk.

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Let there be a tax cut —  
but let it be the real thing . . .

more likely, however, that a cut in tax rates would lower revenues. (See opposite page: “The Uncertainties of the Laffer Effect.”)

Neither of the two main versions of the incentive tax cut is likely to succeed. One version, *the payroll tax cut*, is a plan to reduce the payroll taxes that employers pay on every worker. This, it is supposed, would lower the cost of labor. Businesses would respond by hiring more workers, the additional workers would generate more output and, as this additional output reached the market, prices would tend to be lower.

If the payroll tax cut really worked this way, then we should eliminate all payroll taxes. This, supposedly, would increase employment even further. Perhaps we should even offer businesses a large tax rebate for every employee hired. If the rebate were large enough, this would supposedly stop inflation altogether. The payroll tax cut, of course, would not work like this, because government can't just give away money it does not have. If government really wants to lower payroll taxes, it has to reduce its expenditures or raise other taxes to make up for lost revenues. But then the tax cut might create jobs in one sector by eliminating them in another.

Of course, government could finance the payroll tax cut with more fiat paper, more unbacked debt. And unless it should undergo the most spectacular conversion since Paul went to Damascus, that is what it would do. If the government printed more fiat paper, we would, of course, have more inflation. Labor would doubtlessly recognize this, as it has in the past, and would immediately demand higher wages. Then, the payroll tax cut would only transform a tax levied on employers into an inflation tax levied on everyone. Because of higher inflation, the promised increase in output would fail to materialize.

Another version of the incentive tax cut, *the business tax cut*, is a plan to encourage investment. The argument for this plan is that a cut in business taxes will increase profitability and, hence, the return on capital. Business will then be motivated to invest more, and the increase in capital will generate more output and lower prices. The plan, however, has the crucial weakness of the other tax-cut proposals. If government does not raise tax revenues

through another source, the business tax cut will create higher inflation. The cost of the higher inflation would offset the benefit of lower taxes so that business would not be motivated to invest in more capital or increase its output.

Proponents of both the payroll tax cut and the business tax cut are correct in one regard: the tax structure does change incentives to work or invest. But they overlook a basic point. The real tax burden is the amount of resources government removes directly or indirectly from the private sector. If government does not lower expenditures, a cut in any particular tax will be offset by increases in other taxes, especially the inflation tax. There are two ladies in the magician's box — two types of taxes — not just one. While the obvious taxes may appear to be cut, the hidden taxes are increased.

The proposed tax cuts, however, are not just slick stagecraft. They are not merely pleasant illusions that leave everything unchanged. They do change things — and not necessarily for the better. As they replace direct taxes with the less efficient inflation tax, they cause resources to be needlessly wasted. While pretending to saw the lady in half, the magician destroys a lot of boxes. There is every reason to believe that people would be better off if government used the inflation tax less, since inflation is so wasteful and harms the economy in so many ways.

A tax cut could be worthwhile if it were an honest tax cut — that is, if government truly took fewer resources from the private sector. To do this in any significant way, of course, it would have to reduce expenditures, devise a more efficient tax structure, or both. So let there be a tax cut — but let it be the real thing and not merely a magician's illusion.

*This article was prepared by Preston J. Miller, Assistant Vice President, with assistance from Alan Struthers, Jr., Editor, both of the Research Department of the Federal Reserve Bank of Minneapolis.*

## 1979 Operating Highlights

During 1979, operating performance at the Federal Reserve Bank of Minneapolis reflected a continuation of five-year trends in expense control, unit cost and productivity improvement, and growth in output. Also, a great deal of planning and preparation took place for significant technological changes in the Bank's operations. Ninth District 1979 total operating expenses of \$29.7 million represented an increase of only 5.6 percent over 1978 levels in spite of a 9.6 percent increase in measured output.

As the accompanying charts illustrate, five-year expense, productivity, and unit cost trends have compared quite favorably with standard economic indicators for both the Federal Reserve Bank of Minneapolis and the Federal Reserve System as a whole. Over the five-year period of 1974 through 1979, total operating expenses (Chart 1) have increased at an average annual rate of 6.8 percent for the Federal Reserve System and 4.7 percent for the Federal Reserve Bank of Minneapolis. Over the same five-year period, measurable outputs (Chart 2) have increased at an annual rate of approximately 7.0 percent for both the System and the Minneapolis Bank.

Unit cost performance over this period (Chart 3) has been very strong as 1979 unit costs are 3.2 percent below 1974 levels for the System and 18.2 percent below 1974 levels for the Minneapolis Bank. These compare to a 44.1 percent increase in the GNP price deflator, which is a measure of general price level changes.

Increases in labor productivity (Chart 4) have been a primary contributor to the unit cost performance. Productivity has increased at an average annual rate of 9.6 percent for the System since 1974 and 7.8 percent per year for the Minneapolis Bank. These increases compare to an annual average increase in productivity for the nonfarm business sector of 1.25 percent over the last five years.

In addition to the continued strong performance results, 1979 was also a year of preparation for operations in the new decade. The Federal Reserve Bank of Minneapolis planned for major technological changes in its operations as well as contributed to System efforts on membership, access, and pricing issues. In the operations area, Check Department is in the process of implementing and testing a new generation of faster and larger capacity reader/sorters; these are expected to be fully operational by the third quarter of 1980. This new equipment will increase peak processing capacity by 25 to 30 percent and substantially reduce reject and jam rates. Delivery delays on the new sorters resulted in a shortage of processing capacity during the fourth quarter of 1979 and necessitated an increase in staff levels to accommodate a larger than expected growth in check volume. This contributed to the first annual increase in staff size for the Bank as a whole since 1975 (Chart 5).

Planning also took place in 1979 on the installation of new high speed currency processing equipment in the Money Department. This equipment, which is scheduled to be installed during the first half of 1980, will combine individual note fitness sorting, counterfeit detection and on-line destruction of unfit notes to improve sorting efficiency and costs.

Preparations were also under way this past year for several externally precipitated changes in the Bank's operations, including a new System long-range automation program, a new nationwide Federal Reserve communication system, and planning for potential changes due to membership, access, and pricing legislation.

Chart 1  
Total Expense  
1974 = 100

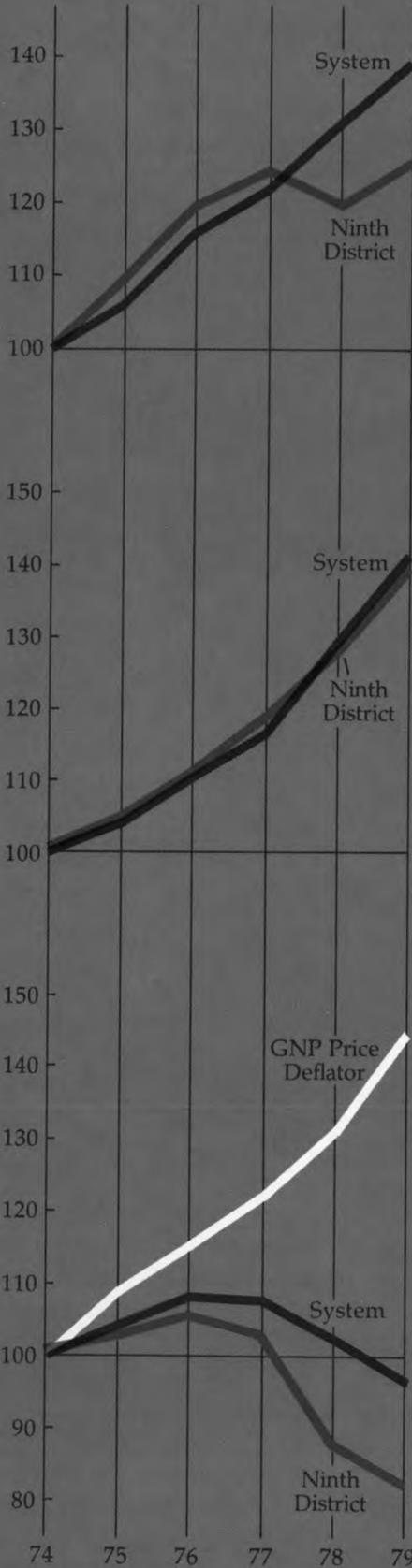


Chart 2  
Total Output  
1974 = 100



Chart 3  
Unit Costs  
1974 = 100

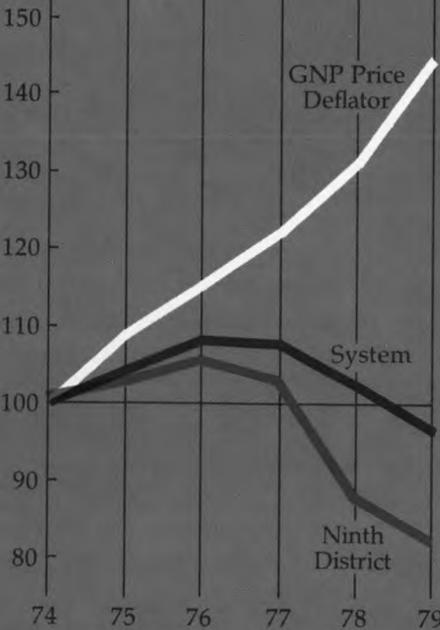


Chart 4  
Labor Productivity  
1974 = 100

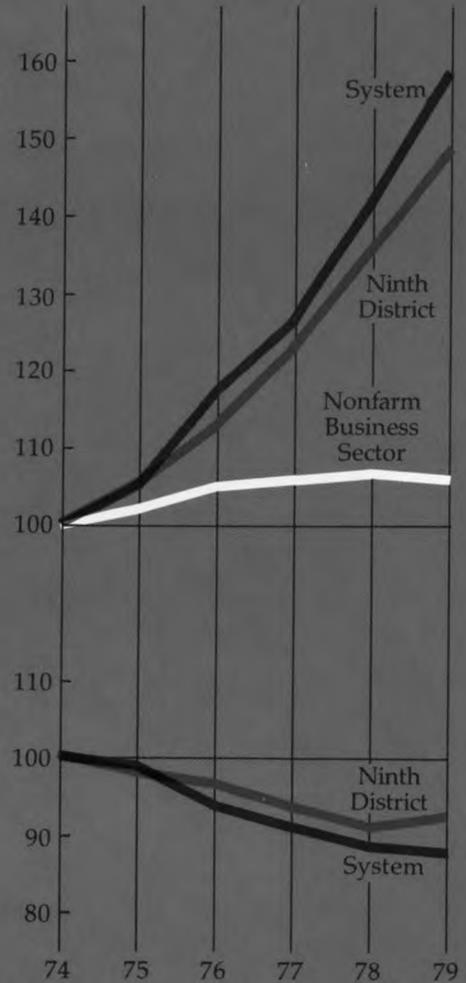
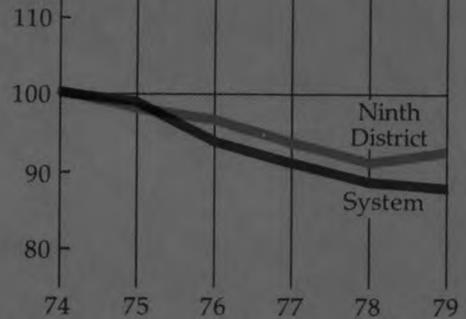


Chart 5  
Employment  
1974 = 100



## Statement of Condition (In thousands)

December 31	<u>1979</u>	<u>1978</u>
<i>ASSETS</i>		
Gold Certificate Account .....	\$ 231,534	\$ 231,177
Interdistrict Settlement Fund .....	(765,306)	(435,146)
Special Drawing Rights Certificate Account .....	32,000	28,000
Coin .....	16,741	11,182
Loans to Member Banks .....	31,440	10,250
Securities:		
Federal Agency Obligations .....	182,625	189,477
U.S. Government Securities .....	<u>2,585,043</u>	<u>2,627,263</u>
Total Securities .....	\$2,767,668	\$2,816,740
Cash Items in Process of Collection .....	994,364	802,060
Premises and Equipment—		
Less: Depreciation of \$9,538 and \$8,217 .....	30,644	30,992
Other Assets .....	<u>156,101</u>	<u>101,654</u>
Total Assets .....	<u>\$3,495,186</u>	<u>\$3,596,909</u>
<i>LIABILITIES</i>		
Federal Reserve Notes .....	\$1,908,623	\$1,854,810
Deposits:		
Reserve Accounts .....	675,326	866,328
U.S. Treasury—General Account .....	175,017	182,605
Foreign .....	9,568	6,081
Other Deposits .....	<u>21,508</u>	<u>7,638</u>
Total Deposits .....	\$ 881,419	\$1,062,652
Deferred Availability Cash Items .....	571,747	559,983
Other Liabilities .....	<u>60,885</u>	<u>51,384</u>
Total Liabilities .....	\$3,422,674	\$3,528,829
<i>CAPITAL ACCOUNTS</i>		
Capital Paid In .....	\$ 36,256	\$ 34,040
Surplus .....	<u>36,256</u>	<u>34,040</u>
Total Capital Accounts .....	\$ 72,512	\$ 68,080
Total Liabilities and Capital Accounts .....	<u>\$3,495,186</u>	<u>\$3,596,909</u>

## Earnings and Expenses (In thousands)

<i>For the Year Ended December 31</i>	<u>1979</u>	<u>1978</u>
<i>CURRENT EARNINGS</i>		
Interest on Loans to Member Banks .....	\$ 6,356	\$ 2,379
Interest on U.S. Government Securities and Federal Agency Obligations .....	226,908	200,243
All Other Earnings .....	<u>2,300</u>	<u>377</u>
Total Current Earnings .....	\$235,564	\$202,999
<i>CURRENT EXPENSES</i>		
Salaries and Other Benefits .....	\$ 17,516	\$ 16,299
Postage and Expressage .....	3,238	3,135
Telephone and Telegraph .....	572	585
Printing and Supplies .....	1,041	944
Real Estate Taxes .....	1,325	1,521
Furniture and Operating Equipment— Rentals, Depreciation, Maintenance .....	1,672	1,505
Depreciation—Bank Premises .....	873	873
Utilities .....	466	489
Other Operating Expenses .....	2,010	1,815
Federal Reserve Currency .....	<u>993</u>	<u>992</u>
Total Current Expenses .....	\$ 29,706	\$28,158
Less Expenses Reimbursed or Recovered .....	<u>2,409</u>	<u>1,942</u>
Net Expenses .....	\$ 27,297	\$ 26,216
<i>CURRENT NET EARNINGS</i> .....	\$208,267	\$176,783
Net Profit (or Loss) .....	(3,621)	(18,252)
Less:		
Assessment for Expenses of Board of Governors .....	1,593	1,596
Dividends Paid .....	2,121	1,921
Payments to U.S. Treasury .....	198,716	151,704
Transferred to Surplus .....	<u>\$ 2,216</u>	<u>\$ 3,310</u>
<i>SURPLUS ACCOUNT</i>		
Surplus, January 1 .....	\$34,040	\$30,730
Transferred to Surplus— <i>as above</i> .....	<u>2,216</u>	<u>3,310</u>
Surplus, December 31 .....	<u>\$36,256</u>	<u>\$34,040</u>

## Volume of Operations\*

<i>For the Year Ended December 31</i>	<i>Number</i>		<i>Dollar Amount</i>	
	<u>1979</u>	<u>1978</u>	<u>1979</u>	<u>1978</u>
Loans to Member Banks .....	1,904	987	\$ 2.4 billion	\$ 1.4 billion
Currency Received and Verified .....	157 million	148 million	1.4 billion	1.3 billion
Coin Received and Counted .....	352 million	637 million	65 million	87 million
Checks Handled, Total .....	770 million	718 million	281 billion	263 billion
Collection Items Handled .....	.3 million	.3 million	.5 billion	.5 billion
Issues, Redemptions, Exchanges of U.S. Government Securities .....	9.8 million	9.2 million	99.4 billion	81.1 billion
Securities Held in Safekeeping .....	520,955	523,772	2.7 billion	2.5 billion
Transfer of Funds .....	1,133,182	1,001,192	1.169 trillion	941 billion

\*Minneapolis and Helena combined

## Directors of the Federal Reserve Bank of Minneapolis

Terms expire December 31 of indicated year

January 1980

Stephen F. Keating  
Chairman and Federal Reserve Agent

William G. Phillips  
Deputy Chairman

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### CLASS A

*Elected by Member Banks*

James H. Smaby (1980)  
President  
Commercial National Bank & Trust Co.  
Iron Mountain, Michigan

Zane G. Murfitt (1981)  
President  
Flint Creek Valley Bank  
Philipsburg, Montana

Henry N. Ness (1982)  
Senior Vice President  
The Fargo National Bank & Trust Co.  
Fargo, North Dakota

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### CLASS B

*Elected by Member Banks*

Donald P. Helgeson (1980)  
Vice President and Secretary  
Jack Frost, Inc.  
St. Cloud, Minnesota

Russell G. Cleary (1981)  
Chairman and President  
G. Heileman Brewing Co., Inc.  
La Crosse, Wisconsin

Joe F. Kirby (1982)  
Chairman  
Western Surety Company  
Sioux Falls, South Dakota

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### CLASS C

*Appointed by Board of Governors*

Stephen F. Keating (1980)  
Vice Chairman  
Honeywell, Inc.  
Minneapolis, Minnesota

William G. Phillips (1981)  
Chairman  
International Multifoods  
Minneapolis, Minnesota

Sister Generose Gervais (1982)  
Administrator  
Saint Mary's Hospital  
Rochester, Minnesota

*Member of Federal Advisory Council*

Clarence G. Frame (1980)  
President  
First National Bank  
St. Paul, Minnesota

## Directors of the Helena Branch

Patricia P. Douglas  
Chairman

Norris E. Hanford  
Vice Chairman

*Appointed by Board of Directors  
FRB of Minneapolis*

Harry W. Newlon (1980)  
President  
First National Bank  
Bozeman, Montana

Jase O. Norsworthy (1980)  
President  
The N·R·G Company  
Billings, Montana

Lynn D. Grobel (1981)  
President  
First National Bank  
Glasgow, Montana

*Appointed by Board of Governors*

Patricia P. Douglas (1980)  
Vice President—Fiscal Affairs  
University of Montana  
Missoula, Montana

Norris E. Hanford (1981)  
Wheat and Barley Operator  
Fort Benton, Montana

## Officers of the Federal Reserve Bank of Minneapolis

January 1980

Mark H. Willes  
President

Thomas E. Gainor  
First Vice President

<i>Senior Vice Presidents</i>	<i>Vice Presidents</i>	<i>Assistant Vice Presidents</i>	
Melvin L. Burstein Senior Vice President and General Counsel	John P. Danforth Vice President and Director of Research	Sheldon L. Azine Assistant Vice President and Assistant Counsel	Ronald E. Kaatz Assistant Vice President
Leonard W. Fernelius Senior Vice President	Lester G. Gable Vice President	James U. Brooks Assistant Vice President	Preston J. Miller Assistant Vice President
John A. MacDonald Senior Vice President	Gary P. Hanson Vice President	Marilyn L. Brown Assistant Vice President	Ruth A. Reister Assistant Vice President and Secretary
	Bruce J. Hedblom Vice President	Richard K. Einan Assistant Vice President	Arthur J. Rolnick Assistant Vice President
	Douglas R. Hellweg Vice President	Phil C. Gerber Assistant Vice President	Charles L. Shromoff Assistant Vice President
	Howard L. Knous Vice President and General Auditor	Richard C. Heiber Assistant Vice President	Colleen K. Strand Assistant Vice President
	David R. McDonald Vice President	William B. Holm Assistant Vice President	Joseph R. Vogel Chief Examiner
	Clarence W. Nelson Vice President	Ronald O. Hostad Assistant Vice President	
	James R. Taylor Vice President		
	Robert W. Worcester Vice President		

## Officers of the Helena Branch

Betty J. Lindstrom  
Vice President

G. Randall Fraser  
Assistant Vice President

Robert F. McNellis  
Assistant Vice President