

Playing by The Rules

A Proposal for Federal Budget Reform



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By Preston J. Miller, *Vice President and Deputy Director of Research*,
and V.V. Chari, *Research Officer*

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annual report are solely those of
the authors; they are not intended
to represent a formal position of
the Federal Reserve System.*

President's Message

This year's essay proposes major changes in the federal budget process. But why should changes be considered now, when just last fall a major reform package was passed? V.V. Chari and Preston Miller argue that the fall reforms provide at best a transition to a more balanced budget; even if the reforms work, many problems will remain. The authors persuasively argue that addressing those problems requires a more fundamental reform of the budget process than the fall reforms provide.

Some may question why the Federal Reserve, which has responsibility for monetary policy, is addressing fiscal policy issues. My response is that the two policies are intertwined. Persistent budget deficits and a rapidly growing federal debt increase the pressures on the Federal Reserve to follow an inflationary policy.

I expect some will also argue that all this talk about the budget process is small potatoes when we know the real problem is policymakers' inadequate attempts to deal with the hard choice of higher taxes or major cuts in spending. No one disputes this is a major part of the problem. This essay's contribution is to show clearly that the process also matters. Under the rule changes proposed by Chari and Miller, problems would not be allowed to accumulate and be foisted on future generations; they would have to be resolved within a two-year balanced budget span.

Not only do they offer a treatment for the problem, but Chari and Miller also provide an analysis of its roots, showing that a sound framework for budget policy decisions is currently lacking. They go on to provide one, based on economic principles, for their proposed set of reforms.

I hope this essay stirs discussion on the nature of the budget policy problem and on economic principles that should be used to guide the process.



A handwritten signature in black ink that reads "Gary H. Stern". The signature is written in a cursive style with a long horizontal line extending to the right.

Gary H. Stern
President



Playing by The Rules

A Proposal for Federal Budget Reform

By Preston J. Miller, *Vice President and Deputy Director of Research*,
and V.V. Chari, *Research Officer*

The federal budget mess just won't go away. Despite the discipline of Gramm-Rudman-Hollings (GRH), the government is running ever larger budget deficits, making poor decisions and spending an inordinate amount of time on the process. In 1990 the budget deficit reached \$220 billion. This year, after the torturous passage of a package of expenditure cuts and tax increases, it's projected to exceed \$300 billion. Yet the original GRH deficit target for fiscal 1991 was zero. Voters are concerned; Congress is concerned; the administration is concerned. Although there is widespread agreement that something is seriously wrong with the budget process, there is less agreement about what should be done about it. In response to this concern, many proposals for reform have been suggested. Yet they miss the mark: they fail to address the problems inherent in the budget process and are not based on sound economic principles.

We provide a conceptual framework for budget policy. Based on this framework, we propose that the federal government change accounting practices, institute rules on debt issue and impose enforcement mechanisms. Our proposal will produce budgets that are balanced over time in an appropriate rather than an arbitrary sense. Our proposal also will help inform the decision makers and the public about their policy options and the financial consequences of those options. Of course, our proposal will not cure all the ills in the budget process. Hard choices will still have to be made.

But first a bit of history. Since the late 1960s, the federal government has consistently run large deficits (Figure 1). These large deficits have led to a dramatic increase in the federal debt as a percentage of GNP in the 1980s (Figure 2). Interest payments to service this debt have absorbed an increasing proportion of our national product (Figure 3).

The debilitating consequences of a growing federal debt are well-known. Large interest payments leave us with less to pay for education, highways, national defense and a variety of useful causes. A growing federal debt tends to raise interest rates and to increase pressure on the Federal Reserve System to follow inflationary policies. This litany of ills may be familiar; nonetheless, it is alarming.

To make things worse, even though total non-defense expenditures have been allowed to grow at double-digit rates, too little money has been allocated for capital

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Components of the Federal Budget

Figure 1 **Net Deficit**

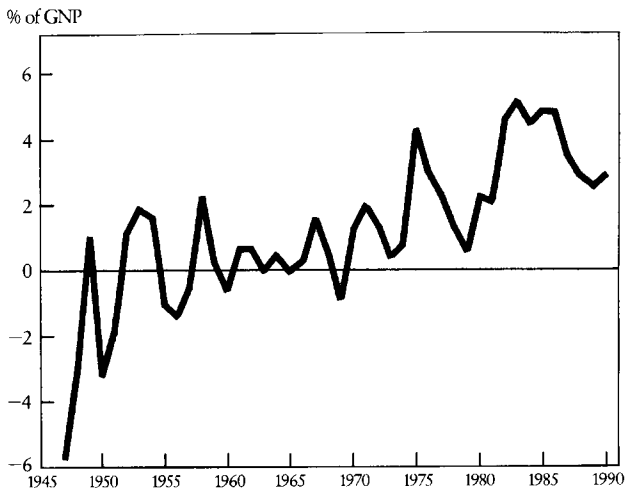


Figure 2 **Net Financial Liabilities**

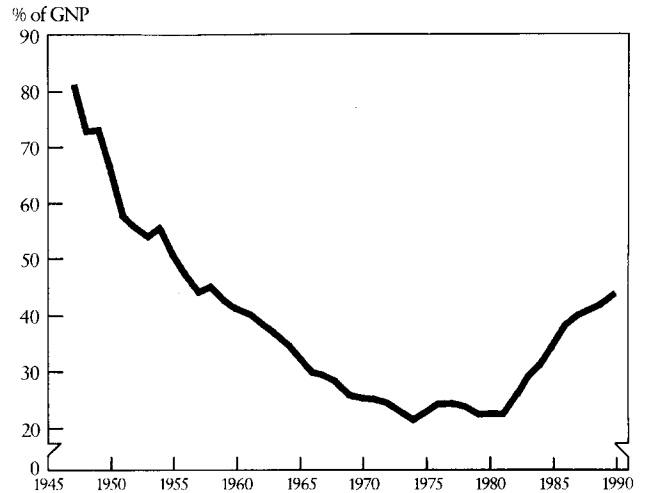


Figure 3 **Net Interest Payments**

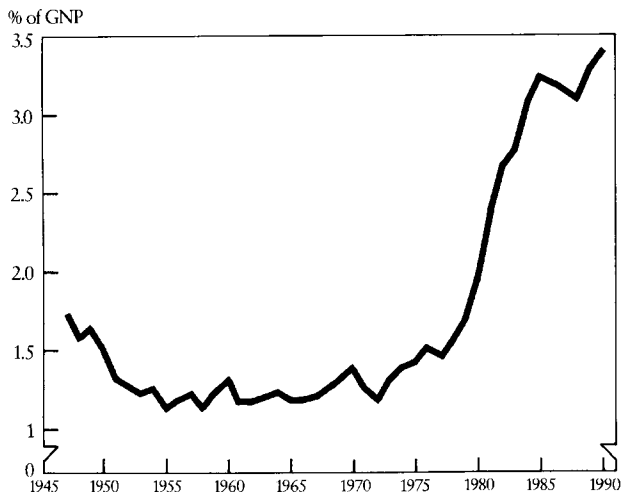
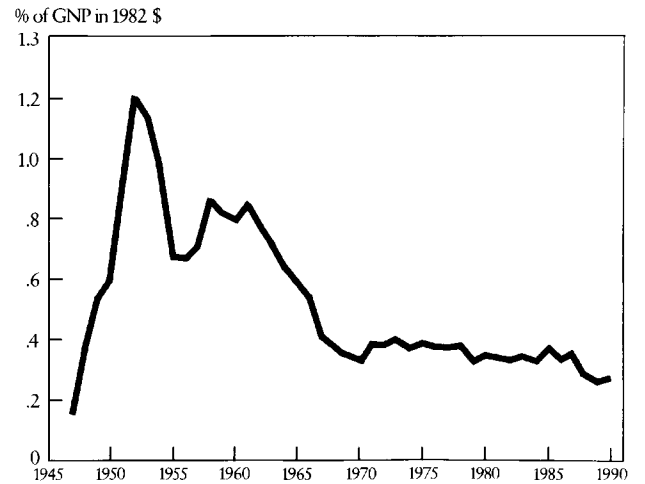


Figure 4 **Construction Expenditures**



Sources: U.S. Department of Commerce and
Department of the Treasury

projects, such as highways, airports and sewer systems. Federal capital spending in fiscal 1991 is projected to be roughly 2.2 percent of GNP, down from 4.4 percent of GNP in the early 1960s. Construction expenditures, which are an important component of capital spending, have declined over the postwar period (Figure 4). Surely we can do better than to leave our children decayed highways, crumbled bridges and antiquated sewer systems, with little or no ability to repair or replace any of them because of the enormous tax bills coming due for services consumed before they were even born.

We are not the first to offer solutions: The Gramm-Rudman-Hollings Act (GRH) and the reforms of last fall were attempts to respond to these problems. While these attempts to reach a balanced budget are laudable, we think our proposal is better. Specifically, we propose that the federal government adopt the following:

- Record transactions on an accrual basis and maintain separate operating and capital budgets,
- Require that the combined operating budget in the current and subsequent fiscal years be balanced, and establish overall limits on capital spending,
- Institute enforcement mechanisms based on performance to ensure that the rules are being followed,
- Set up rainy day funds to meet contingencies.

We would, of course, not be averse to an escape clause suspending the rules in the event of a war or national emergency. But we think that such suspension should require a supermajority of votes in Congress and the assent of the president.

Why do we need these or any rules at all? Why not rely on policy-makers to make good decisions? The problem is that the policy-making process is fundamentally biased against the future. Without rules to constrain policy decisions, we will continue to have bad outcomes. So the question is not whether to have rules, it is which rules to have. The current rules do not address the bias, nor are they based on sound economic principles. In the rest of the essay, we explain the bias in policy-making, show that the current set of rules is inadequate and argue that our rules will yield good outcomes.

The Need for Policy Rules

Our political system encourages elected officials to adopt policies that are biased against the future. They are biased, because they are not what voters ideally would like. Voters tend to have a long-term view on policy issues. They care about the outcomes of policy decisions not only over their own lifetimes but over the lifetimes of their descendants. Elected officials, however, tend to adopt a short-term view on policy issues.

But why should this be so? If voters could keep themselves fully informed, closely monitor decisions and understand the effects of alternative policies, surely they would force their elected officials to act in the public's interest. Voters would boot out officials

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who acted badly or develop institutional arrangements that set up proper incentives. But voters have neither the ability nor the incentive to get the information necessary to do these things.

It is especially difficult for voters to decide whether policy-makers are making wise choices on decisions that will yield benefits or costs several years into the future. So even though voters care about the future, they weight current results heavily. They rationally reward policy-makers who make decisions yielding large current benefits even if some of those decisions impose future costs. In order to get reelected, policy-makers have incentives to make decisions that are systematically biased against the future. Thus, it is not especially helpful to argue that if incumbent policy-makers were replaced, wiser policies would be chosen. The problem is that the system encourages policy-makers to adopt the short-term view.

This bias results in decisions weighted toward current rather than future consumption. In particular, these decisions mean too much deficit financing, too little capital investment and a proclivity to put off until tomorrow projects which should be undertaken today. The immediate benefit to elected officials is easily seen. Deficit financing shifts the tax burden for current consumption into the future. This allows more consumption now but less in the future as the taxes are paid. Less capital investment frees up resources and allows more consumption now, but since fewer resources have been invested, there is a smaller supply of goods available for future consumption. Elected officials can also make more resources available for current consumption by putting off projects such as maintenance of the infrastructure or closure of insolvent thrifts. But the problem is that such actions leave fewer resources available in the future as the real costs of the necessary, but delayed, expenditures escalate.

This policy-making bias against the future is not unique to the government, however. Corporate stockholders face many of the same problems as voters in deciding whether corporate managers are acting wisely. Corporate managers act on behalf of stockholders yet they have different interests. Stockholders have incomplete knowledge about the managers' decisions and the consequences of the managers' actions. These are features of the so-called *agency problem*.

Furthermore, no single stockholder has much incentive to monitor management's actions. Stockholdings are typically dispersed among many individuals. Each stockholder has an incentive to let other stockholders monitor the firm. As a result, typically there is less monitoring of firms' actions than would occur if the stockholders could act jointly. This is known as the *free rider problem*.

Voters also face the agency and free rider problems. It is difficult to know the consequences of policy-makers' actions and each voter has an incentive to free ride on other voters. The agency and free rider problems can be mitigated but not entirely solved. If stockholders cannot entirely solve these problems, certainly voters cannot be expected to solve them completely either, since compared to corporate decisions, government policy decisions are aimed at more diverse objectives and the responsibility for them is more diffuse.

How stockholders attempt to manage the agency and free rider problems suggests ways voters might deal with them, though. Publicly traded corporations, for example, are required to adopt standard accounting practices (known as Generally Accepted Accounting Principles) to inhibit inaccurate presentation of information. Corporate charters also limit management's discretion. We think these ideas can and should be used to design better policy procedures for the federal government. Corporations also adopt a variety of other practices to align managers' and stockholders' interests, including incentive contracts for managers, hostile takeovers and so on. It is not apparent how, or even whether, these other practices can be transferred to the government, so here we will stick to practices that seem readily transferable.

The agency and free rider problems point to a need for rules to limit policymakers' discretion. To understand why we are proposing new rules it is important to understand what's wrong with the old ones.

The Problems With the Old Rules

The Gramm-Rudman-Hollings Process

Prior to the fall 1990 reforms, the budget process was designed to work roughly as follows: Early in January the president would submit to Congress a budget for the fiscal year beginning October 1. By the time Congress would adjourn in the summer it would pass bills and a budget resolution specifying amounts to be appropriated to discretionary spending programs and changes to be made to rules for entitlement programs and taxes. In mid-August the Office of Management and Budget (OMB) would determine whether the projected deficit for the upcoming fiscal year exceeded the GRH target by more than \$10 billion. If it did, automatic spending cuts would be made according to a statutory formula to ensure that the projected deficit met the target. Then at some point Congress would raise the debt ceiling so that there was authority to issue additional debt to finance the projected deficit.

The GRH procedure was supposed to lead to balanced budgets and to eliminate the government's deficit financing bias by the use of rules. The procedure did not come close to achieving its goal and the original GRH targets had to be revised several times (Figure 5). In addition, the process led to other problems.

Rather than curbing the government's bias to excessively discount the future, the GRH process fed it. By focusing on the projected budget deficit in the approaching fiscal year, the process encouraged deficit financing, discouraged capital spending and made it more attractive to delay necessary expenditures.

Paradoxically, the GRH process made deficit financing easier by encouraging the substitution of gimmicks for real actions. The gimmicks included the exchanging of assets, time-shifting of payments, movement of expenditures off the budget and use of unrealistic economic and technical assumptions. Selling government assets, such as loans, for cash resulted in budget savings, even though all that occurred was the exchange of one asset for another one of comparable value. Time-shifting created one-time fictitious savings by taking payments scheduled for the approaching fiscal year

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Figure 5 **Gramm-Rudman: Receding Targets**
(By fiscal year; in billions of dollars)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Actual Deficit	\$221.2	\$149.7	\$155.1	\$153.4	\$220.4					
Gramm-Rudman I (1985)	171.9	144.0	108.0	72.0	36.0	0				
Gramm-Rudman II (1987)			144.0	136.0	100.0	64.0	28.0	0		
Gramm-Rudman III (1990)						327.0	349.8	285.2	157.5	117.3

Due to bookkeeping changes, the Gramm-Rudman III deficit targets are not directly comparable to those of the first two versions of the antideficit law. New accounting rules exclude the surplus in the Social Security trust funds from the deficit calculations; that has the effect of increasing the deficit by at least \$60 billion a year. These latest targets are larger than those in the original 1990 budget deal because of pre-planned adjustments in the president's 1992 budget.

Source: *Congressional Quarterly Weekly Report*,
 February 9, 1991, Vol. 49, No. 6, page 337.

and moving them into the current fiscal year where they were simply spilt milk, or into the following fiscal year where they were not yet subject to a sequester. For example, the government achieved savings in an approaching fiscal year by taking payments such as employees' pay and farm subsidies due out in late September and delaying them until early October of the following fiscal year. Then without retribution, the government was able to switch the payments back once the new fiscal year was entered. Movement of expenditures off-budget, such as was done for the U.S. Postal Service and the Resolution Trust Corporation (RTC), produced budget savings by a stroke of the pen without doing anything real. Finally, projected deficits were reduced by use of optimistic economic and technical assumptions that overestimated tax revenue, underestimated interest expense and understated the costs of existing programs.

Just how extensively were these gimmicks used? Robert Reischauer, director of the Congressional Budget Office (CBO), notes that the amount of permanent deficit reduction enacted in the GRH period averaged a bit less than in the pre-GRH period of same duration: "What is different about the two periods is the reliance on one-time savings that became a feature of the GRH period. ...In the pre-GRH period, these gimmicks occurred so infrequently that CBO did not keep systematic track of them. In the GRH era, fully half of the apparent deficit reduction has been achieved

by such devices” (Reischauer, 1990). Reischauer also notes that under GRH the amount of budget savings in the president’s budget attributable to overly optimistic economic and technical assumptions more than tripled.

The GRH process, combined with existing accounting practices, also made capital spending highly susceptible to the knife. Existing accounting practices treat spending on capital projects, such as bridges, no differently than spending on current consumption, such as legal counseling. Yet the two are fundamentally different. A capital project provides services in the current year as well as in the future, while current consumption provides services only in the year in which they were purchased. As a result of this difference, spending on a capital project can be preferable to spending on current consumption yet can return less in benefits in the current year since it also provides benefits in future years. When GRH forced budget cuts in an approaching year, the existing accounting practice led government officials to believe that a dollar cut from capital spending would cause less immediate loss in benefits than would a dollar cut from current consumption. To understand better why this is so, consider the following example.

Suppose the government has decided to build a bridge at a cost of \$30 million which is expected to provide services over 30 years worth \$6.4 million per year. Suppose the interest rate is 10 percent so that the present-value of these services is \$60 million. With the present value of the benefits at double the cost, the bridge obviously should be built. But under the government’s accounting system, dropping the project saves \$30 million in costs and sacrifices only \$6.4 million in benefits. In contrast, a \$30 million cut in spending on a less attractive current consumption item, for which benefits only matched costs, would sacrifice \$30 million in benefits. Given the short-term focus of GRH, accounting exercises such as these might well explain why capital spending was so susceptible to the knife.

In addition to capital spending, GRH made it unattractive to spend money on other projects having short-term costs and long-term benefits. For example, the government avoided proper maintenance of nuclear armaments plants to save money in the short term. Because of that neglect, the cost of keeping these plants operating has escalated and the additional cost is now estimated by the CBO to be roughly \$160 billion spread over the next 40 years. Another painful example is the savings and loan crisis. If the government had dealt with the problem when it surfaced in 1986, it would have meant closing some insolvent thrifts at an estimated cost of \$10 billion to \$15 billion. But the government balked, at least in part because it didn’t want to put more pressure on itself to abide by the GRH targets. So spending to remedy the problem was delayed, the problem mushroomed, and the cost to the government as estimated by the CBO and the General Accounting Office rose to over \$150 billion in present-value terms.

The GRH process not only generated poor results, it also contributed to delays and confusion. Without a conceptual framework, policy-makers were forced to debate each minor budget variation as if it were a new theme.

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The Fall 1990 Reforms

The government was well aware that the budget process was in need of repair and direction. The administration suggested numerous reforms, including instituting a line-item veto and changing the accounting procedures for loans and guarantees. The budget committees in both chambers of Congress held hearings on reform, several bills proposing reforms were introduced and the budget package that finally was passed last fall contains important reforms of the process.

It's too early to judge whether the fall reforms will lead to improvements in the process, but it's not too early to argue they don't go far enough. These reforms still fail to provide government officials with a conceptual framework for making decisions, and the definition of budget deficits and the targets for them remain arbitrary.

Main Features of the Fall 1990 Budget Process Reforms

- **Five-Year Budgeting.** Budget resolutions and necessary reconciliation bills must project spending, revenues and deficits for five years.
- **Discretionary Spending Caps.** Appropriations bills must stay within separate caps for defense, foreign aid and domestic discretionary spending for fiscal 1991-93; for fiscal 1994-95, the law sets overall discretionary spending caps.
- **Enforcement.** A complicated set of sequesters ensures that spending stays within the caps in the bill. Essentially, these sequesters apply if the Office of Management and Budget determines that spending will exceed the caps. The sequesters also “look back” to offset spending increases or revenue cuts in the prior fiscal year.
- **Pay-As-You-Go Entitlements and Revenues.** Bills containing increases in entitlement or other mandatory spending or reducing revenues must be offset by entitlement cuts or revenue increases.
- **Social Security and Deposit Insurance.** Social Security receipts and expenditures will no longer be included in budget calculations. Increased spending for deposit insurance activities—chiefly the savings and loan salvage operation—will not be allowed to trigger sequesters.
- **Emergencies.** If requested to do so by the president, Congress could enact emergency appropriations, entitlement increases or revenue cuts without triggering sequesters.
- **War and Recession.** A declaration of war would still cancel the sequester process. Congress could still vote to cancel the sequester process in the event of a projected recession or measured economic growth below 1 percent for two consecutive quarters.

The reforms make it more difficult to exceed the deficit targets, but they also make it easier to raise the targets (see box for details on the reforms). Under the new process, there are constraints placed not only on the size of the total budget deficit as before, but also separately on entitlements, revenues and three types of discretionary spending. In addition, a series of three sequesters can be prompted by spending overruns in the prior fiscal year. These reforms give Congress less maneuvering room to exceed budget deficit targets. But at the same time, the reforms allow the deficit targets to be raised for economic and technical reasons, emergencies and increased spending on deposit insurance activities. Since the targets are arbitrary, the government is highly likely to use these loopholes to continue its deficit spending ways.

The reforms also fail to resolve problems associated with the current accounting system. Under the fall reforms it is still possible to achieve budget “savings” by shifting payments forward into future fiscal years, although the reforms remove much of the incentive to shift them back to the current fiscal year. That’s because past spending overruns could prompt a sequester and thus are no longer treated as spilt milk. However, the reforms do nothing to address the bias against capital spending. Capital expenditures are still treated no differently from current expenditures.

We have argued that rules are needed to address the policy bias problem, but we have seen that bad rules can create further problems. While the fall 1990 reforms improve the original GRH rules, a lot more should be done. That is why we offer our proposal.

The fall reforms of the budget process provide a transition to a more balanced federal budget. But even if they take us to that destination, problems will remain. Without a logical basis for their targets, policy-makers will find ways to violate them. Without a sound accounting system, they will continue to bias their decisions. And without a conceptual framework, they will continue to debate every budget nuance as if it were a new problem.

The Case for Our Rules

Basic Principles

Our budget proposal is a set of reforms intended to reduce both the policy-making bias and the confusion associated with current procedures, and it’s guided by four basic economic principles.

First, the budget should be balanced in a present-value sense without use of the inflation tax. This principle is based on an accounting identity and on a stated goal of macroeconomic policy. The identity says that what goes out from the government must come in, and it implies that the present value of government expenditures cannot exceed the present value of government receipts. Since it would be inefficient for the government to take in more than was needed, it follows that the present value of government expenditures should equal the present value of government receipts. In this equality receipts can include proceeds from the inflation tax, that is, the depreciation caused by inflation in the value of government nominal liabilities. However, based on statements in Humphrey-Hawkins legislation and congressional

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testimony of high officials in the Federal Reserve, we take price stability to be a goal of policy. With zero inflation as a goal, the first principle follows.

Second, benefits should outweigh costs. This follows from the theory of economic policy-making which requires that government officials weigh alternative programs in terms of their economic benefits and costs to society. Since the services of programs occur over time, the government must measure benefits and costs in expected, present-value terms. Those benefits and costs are dated to occur when resources are transferred in and out of the private sector. Thus, when the government hires workers, the economic cost occurs when the workers enter the public sector and not when the government gets around to mailing their checks.

The third economic principle is that users pay. That beneficiaries of government programs should pay is partly a fairness argument. It also has the virtue of making it more likely that the benefits of public programs exceed their costs, since those costs cannot be pushed off on non-involved parties. This principle suggests that borrowing to finance current consumption is unacceptable because that method of financing pushes the costs off to future generations who do not benefit from the consumption. In contrast, it also suggests that borrowing to finance capital spending is acceptable since future generations will benefit from the services of that capital. Obviously this principle cannot be applied across the board. By definition, income redistribution programs, such as welfare, cannot be financed by recipients. But some other programs, such as the national parks and the highway system, would fall squarely under the user-pays principle. And most other programs would fall under this principle in a general way. Current services should be paid for by the current generation. And transfers to the poor of one generation, which are designed to even the income distribution, should be paid for by the wealthy of the same generation.

Our fourth economic principle, tax smoothing, is an implication of studies of the tax structure. The implication follows as long as the *deadweight loss*, the distortions caused by the tax and the resources burned up in collecting it, rises disproportionately with the tax rate. That is, the deadweight loss more than doubles when the tax rate doubles. Tax smoothing means that when the government has commitments to spend in the future, it should begin taxing for them today. This is true whether those commitments are contractual, such as underfunded pensions, or non-contractual but fairly certain to occur, such as wars or natural disasters. What this means in practice is that it's more efficient to raise taxes a little bit now and keep them there than it is to wait and raise them a lot when the spending takes place.

We believe that these four simple principles suggest reforms of the budget process which help deal with the policy bias problem. We also believe they can provide guidance on many current budgetary issues.

Our Reforms in More Detail

Our proposal for reform is hardly radical. It is composed of modest changes in accounting procedures, rules on debt issue and enforcement mechanisms. Most of the changes are either incorporated into budget practices of corporations and state

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and local governments or included in other proposals for federal budget reform.

The accounting changes we propose are that expenditures and receipts be recorded on an accrual basis and that separate accounts be maintained for operating and capital items. These accounting changes follow directly from our cost-benefit timing and user-pays principles. Our cost-benefit timing principle requires that expenditures and receipts be recorded when the activity giving rise to them occurs; that is, they should be recorded on an accrual basis. Our user-pays principle suggests that it is not appropriate to borrow for operating expenses but it may be appropriate to borrow for capital. Therefore, it follows that separate accounts should be maintained for operating and capital items.

These accounting changes allow the financial effects of alternative policy actions to be more accurately represented. This facilitates official decision making and also makes it easier for voters to monitor officials' actions. Our proposals for accounting changes are not original. They have been proposed by the General Accounting Office (GAO) and they have been included in a bill introduced by Sen. Herbert Kohl of Wisconsin. Most firms and state governments, as well as the Federal Reserve, maintain separate operating and capital accounts. The federal budget is reported on an accrual basis in the National Income Accounts, and the budget, calculated as the GAO and we recommend, is produced by the OMB in a timely manner. Thus, all that is new here is that we are proposing using this existing budget information as the basis for policy deliberations and rules.

The rule changes we propose limit the amount of debt the government can issue on its operating and capital accounts. The rules follow from our principles and from our attempts to reduce the policy bias. Although they involve only minor changes to existing rules, they provide explicit policy targets.

We propose to limit the debt that can be issued on the operating budget by requiring that the combined estimated and projected budget balance be zero in the current and subsequent fiscal years. Since the accounts would be maintained on an accrual basis, the proposal allows operating debt to be issued temporarily when there is a mistiming of payments and receipts. It also could be issued temporarily when unforeseen spending increases or revenue losses occur. However, by including the current year's deficit in the calculation, the government would have to implement policies to eliminate debt caused by mistakes in budget projections. This proposal is similar to current GRH procedures and suggested balance-the-budget amendments. What is new in our proposal is that the budget being balanced is the operating budget and that adherence to the rule leads straightforwardly to present-value balance of the entire budget, without inflation, as our first principle requires.

But why a two-year rule rather than a five-year rule or a month-by-month rule? Given the nature of the policy bias against the future, a rule requiring a balanced budget over a fairly short time frame is desirable. Otherwise, policy-makers can continue to run deficits while claiming they will be offset by surpluses at some distant time. However, neither spending nor tax revenues can be forecasted very accurately, and unforeseen events do occur. Thus, if the time frame is too short, policy-makers

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We propose to limit the debt that can be issued on the capital budget by requiring Congress to pass a bill annually authorizing debt issue up to a specified ceiling. While this is much like current procedures, our ceiling applies only to debt issued to finance capital spending. This means that the ceiling would be an independent control on capital spending.

will continually be forced to make changes to expenditure programs or tax rates. In our view, a two-year rule is a reasonable compromise.

We propose to limit the debt that can be issued on the capital budget by requiring Congress to pass a bill annually authorizing debt issue up to a specified ceiling. While this is much like current procedures, our ceiling applies only to debt issued to finance capital spending. This means that the ceiling would be an independent control on capital spending. It would not be redundant, required as it is now, to accommodate the operating deficits Congress has planned. Since all capital spending would be financed by debt issue, setting a ceiling on debt would be equivalent to setting a ceiling on federal capital spending. This would let policy-makers better decide on a desirable mix of private and public capital. More capital spending would be desirable as long as the benefits of a project were at least as large as its costs. We view a ceiling on total capital spending as desirable so that Congress as a whole can effectively force constituencies for capital spending to compete with each other. This reduces the incentives to spend excessively on capital equipment.

We propose to enforce the rules using approaches similar to current practices. The rule on operating debt would be enforced with a sequester. The sequester could be applied in a disaggregated way, as it is under current procedures. The sequester would be triggered whenever the combined operating deficit in the current and succeeding year exceeded some small amount—say \$10 billion to match the trigger amount under GRH. The sequester would require cuts in spending or increases in revenue to achieve combined budget balance. Thus, if there were an unforeseen deficit of \$20 billion in the current fiscal year, the government would have to adopt policies leading to a \$20 billion surplus in the succeeding year. We would limit the amount of deficit reduction in a sequester to 0.5 percent of GNP, which is roughly the amount of reduction that experts testified could be implemented without causing major economic disruptions.

The rule on capital debt would be self-enforcing. The Treasury simply would not be authorized to issue debt above the legislated ceilings.

Our proposals so far are derived from our economic principles of present-value balance, cost-benefit comparison and user-pays, but seem in conflict with our tax-smoothing principle. The reason is that government spending and revenues fluctuate due to causes that cannot be perfectly anticipated. Wars and recessions are as likely to occur in the future as they have in the past, but it's hard to know when. Therefore, meeting the two-year balanced budget rule would require sharp changes in tax rates when these contingencies occur. To avoid these kinds of changes in tax rates, we propose that rainy day funds be set up to meet contingencies. These rainy day funds would be set apart from the operating budget. Inflows of cash into these funds would be counted as outlays for the operating budget and outflows from these funds would be counted as receipts. By drawing down the funds in bad times and building them up in good times, tax rates would not have to be adjusted in conflict with our tax-smoothing principle. Since we recognize the temptation to raid these funds in good times, we suggest that a supermajority in Congress be required to use these funds.

What Our Reforms Will Accomplish

Our reforms are intended to lessen the government's bias to overly discount the future and to remove some of the confusion that surrounds current budgetary practices. We argue that they lessen the bias by making deficit financing more difficult, capital spending more attractive and procrastinating more costly. We argue that they reduce the confusion by providing a framework based on economic principles.

How do we make deficit spending more difficult? Reporting the accounts on an accrual basis takes away the budget "savings" options of selling off assets for cash and delaying payments to government employees or program beneficiaries. Accrual accounting records when activities take place and not when exchanges or payments are made. Including an explicit makeup for past errors in the enforcement mechanism reduces the incentive to use overly optimistic economic and technical assumptions. Mistakes require painful adjustments in the upcoming year. And, as we argue later, requiring present-value balance makes the movement of items to off-budget status less advantageous. However, the most important contribution the proposal makes to controlling deficits is that it provides a definition of budget deficit and specifications of targets which are guided by economic principles and, thus, have some logical basis.

One problem with the GRH targets is that they were designed to lead to budget balance for an arbitrary definition of the budget. There is no economic principle that suggests the deficit should be zero when capital transactions are included in the definition of balance. Moreover, under the GRH deficit definition there are different targets depending on whether Social Security or the RTC are included.

Our definition and targets are not as arbitrary as those of GRH, and that should make it harder to raise or disregard the deficit targets. They are guided by the present-value principle. The definition makes clear that capital transactions are excluded from the zero deficit target. Having a clearer idea of the reason for the targets should make it easier to stay the course.

Our proposal also makes capital spending more attractive by putting it on a more equal footing with current spending. A dollar cut from capital spending would have a comparable effect in the current fiscal year to a dollar cut from current spending. That is because in our proposal the operating cost of a capital asset is spread out over the life of the asset. While the purchase price of the asset is reported in the capital budget, only the annual depreciation and interest financing expense are reported on the operating budget. Thus, a dollar cut from capital spending cuts current spending by the amount of depreciation and interest. Our method spreads the cost of capital equipment over the years it provides services, while the current method charges it all to the current year. Our yearly charge is essentially what it would cost the government if it rented the capital from a private party.

The main difference between our method and current practices is how it treats dollars saved on capital spending in the current year. If the government decided not to purchase capital equipment, our method would show that the savings in current expenses would be only depreciation and interest. According to current practices the savings would be the cost of the capital purchase, which is much larger. As a result,

current practices make cuts in capital spending look more attractive to policy-makers than they really are.

As is usual under standard accounting principles, we would require that the government's assets be carried on its books at the lesser of cost or market value. Some assets of the government have an ascertainable market value such as the assets acquired from failed savings and loans. Thus, for such assets the government would have an incentive to provide appropriate maintenance. If the government did not maintain such assets appropriately, their market value would fall, thereby resulting in a larger depreciation charge and adversely affecting the government's operating budget. Even for assets without a readily ascertainable market value, such as nuclear armaments plants, standard accounting practices provide better incentive for maintenance than current practices.

Our method also requires quick action to balance the budget when circumstances change. In this sense, under our proposal the federal government would be forced to act like state and local governments now do. Under our proposal, difficult choices could not be simply passed on to future Congresses and administrations.

To illustrate how our proposal and the economic principles on which it is based could work to reduce the confusion surrounding current budgetary issues, we examine the treatment of trust funds, the RTC, loans and guarantees and future commitments.

The controversy over trust funds, such as Social Security, is whether they should be on-budget or off-budget. If on-budget, their balances would be included in deficit calculations and targets. If off-budget, they would not.

Our present-value balance principle gives some guidance on this issue. To move a program off-budget means that the program should have an independent budget. It should neither rely on revenue from the general budget nor should its earmarked revenue be accessible to other programs in the budget. If it's not independent, then it's not truly a trust fund and it's not truly off-budget. The question of whether Social Security should be off-budget is then a question of whether its budget should be independent of the general budget. If the answer is yes, then by the present-value principle the Social Security budget and the general budget should be balanced independently in a present-value sense. If the answer is no, then just the sum of the two budgets should be balanced in present value. Within this framework, policy-makers must first decide whether they want Social Security to have an independent budget, and if they do, they will find their choices to be quite limited on the financing of committed Social Security benefits. For instance, experts believe that given current benefit schedules and tax rates the Social Security system is balanced in present-value terms. Thus, by the present-value and tax-smoothing principles, policy-makers would not be allowed to lower Social Security tax rates unless they also lowered the benefits.

We should also point out that our analysis of the policy bias problem suggests that trust fund accounting can be a useful disciplinary device. Because voters lack the information required to monitor the actions of policy-makers, it's hard to monitor whether policy-makers are following the cost-benefit principle. This monitoring

difficulty is particularly acute when expenditures are financed out of general tax revenues. Beneficiaries have every reason to argue that the benefits accruing to them are large, whether they value the services a lot or a little. Dedicated programs with independent revenue sources that have strong safeguards against raiding the treasury can be useful in solving the monitoring problem. From this perspective, trust funds are not merely an accounting device; rather, they serve an important economic function.

We also recognize that trust funds can be abused. Given the bias in policy-making, policy-makers have an incentive to postpone costs and accelerate benefits. For example, policy-makers have an incentive to run a deficit or a smaller surplus than is desirable on the Social Security system. The result is that future benefits must be reduced or future taxes raised if the system is to be independently balanced. One crude way to limit abuses of this kind is to require that trust funds not run a deficit.

The issue on RTC spending is how to split it up into on-budget and off-budget. The RTC handles the assets and liabilities of failed thrifts. Since RTC spending relies on general revenues, our reasoning on trust funds suggests all of it belongs on-budget. The drive to move some of it off-budget was mainly a result of the current procedure's failure to distinguish capital spending from operating expenses. What typically occurs is that the RTC takes over a failed thrift with assets valued at, say, \$700 million and insured deposits of, say, \$1 billion. The \$1 billion must be paid off immediately, while the \$700 million in assets is sold gradually over a number of years. By current methods the \$1 billion is treated as a current expenditure. Then, when the assets are sold over time, the sale receipts are treated as revenue. The pay-off to depositors is funded by debt issue and the debt is in effect reduced when the assets are sold. The interest is also treated as an expenditure. The current procedure clearly overstates the deficit in the current year, since it assigns no value to the assets the government acquires. The drive to move RTC spending off-budget was a clumsy attempt to correct this problem.

Using our procedures, only the capital loss and interest expense would show up on the operating budget. That budget would not be affected by the timing of asset sales. When the RTC initially takes over the failed thrift, it would be considered a capital purchase of \$1 billion financed by debt. However, since the assets were worth only \$700 million, there would be an immediate write-off of \$300 million charged to depreciation. As with other capital purchases, there also would be an associated interest expense. Future asset sales would affect the operating budget only to the extent that actual sale values differed from the capital budget's assumed market values. Thus, using our procedures, RTC spending would be treated no differently from other capital spending.

Capital budgeting also would clarify the treatment of government loans and guarantees. These items involve subsidies that are realized when private parties fail to maintain payments on loans. Past budget practices have treated the government loss of loan revenue or payment on a loan guarantee as a budget deficit increase at the time they occur. Thus, it appears to policy-makers as a good way to give out subsidies now and pay for them much later. Under our proposal, loans and guarantees would be

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included in the capital budget as assets and liabilities, respectively. The subsidies on loans and guarantees would show up on the operating budget at the time the loans and guarantees were granted. Under our proposal policy-makers would be confronted immediately with the costs of the subsidies. We should point out that the way loans and guarantees affect the operating budget under our proposal is similar to how they will affect the GRH budget following last year's reforms.

Finally, our tax-smoothing principle suggests that revenue should be collected today for future commitments. Currently the money is not collected until after the event occurs. Some of the commitments are contractual or explicit, such as pensions, and for these the government might make advance payments into something like an escrow account. Other commitments are not explicit but are fairly certain to occur in the future, such as wars and natural disasters. For these we have proposed that the government make advance payments into a rainy day account. The purpose of the escrow and rainy day accounts is to provide present-value budget balance without having to change tax rates. Assuming that the government's capital expenditures rise at the same rate as national income, the effect of the accounts is to lower the government's debt-to-income ratio over time until the commitments are realized and then to allow them to rise at that time. Over long periods of time, the debt-to-income ratio would remain constant.

The purpose of using our procedures to examine these issues is to show their practical value. We believe they can considerably reduce the confusion surrounding current budget practices.

Objections to Our Reforms

Since aspects of our proposal have been tossed around for some time, we can anticipate two important objections to it. One objection is that it does not accommodate countercyclical policy, and the other is that our proposal would encourage policy-makers to move everything over to the capital budget. Although these objections have some validity, we believe they are not decisive. We believe the constraint on countercyclical policy is not very costly, and we believe safeguards can be put in place to limit misclassification of expenditures.

Consider first the loss in flexibility to conduct fiscal policy. Our proposal allows some limited countercyclical policy, but it does not allow the government to suspend the rules in case of a recession. The availability of a rainy day fund would, in any case, allow for some countercyclical fiscal policy. But when an unforeseen shortfall does occur, it could be accommodated in the current year, provided it is made up for in the succeeding year. The government would also be able to increase capital spending in a recession when interest rates were low, because such spending then would generate less interest expense.

Nonetheless, our proposal is more rigid on countercyclical policy-making than current procedures. We do not think this rigidity is very costly because we are unaware of any evidence that discretionary countercyclical budget policy works. Most studies show that lags in responding to recessions cause any stimulative effects

of fiscal policy to occur too late, well into the ensuing recovery. Furthermore, the rigidity could be beneficial. If the decline in the growth rate of real output goes on for a long period, perhaps there is a secular as well as a cyclical element. To the extent that an output decline signals a long-term reduction in output growth, the government should reduce spending.

Consider next the objection that policy-makers will want to move everything to the capital budget. To a great extent that's true, but we argue that now everything, in effect, is treated as a capital expense. The government can borrow to finance any expenditure. So by strictly defining what is a capital expenditure, as states have done and as the GAO proposes for the federal government, many expenditures can be kept off the capital budget.

Even with strict definitions, though, there will be problems with misclassifications or understating of depreciation on capital items. Some expenditures that provide benefits in future years would be classified as current. In fact, we would favor including most human resource programs, such as those for education, crime control and health, on the operating budget. We do not deny that a better educated, better protected and healthier population will make people better off in the future. We also do not deny that requiring these expenditures to be paid in full in the current year could lead to underfunding. It is just our judgment that the underfunding bias would be no greater than the policy-makers' bias to overspend on current consumption. Thus, we judge that by strictly limiting the capital budget to long-lived physical and nominal assets, a small cost in terms of underfunding of some expenditures would be more than offset: there would be a smaller bias toward overspending on current consumption, which now is facilitated by abuse of the debt-issue option.

The government would also try to understate depreciation, as states and corporations have been known to do. It could classify some current consumption items as capital items and assign them value, even though, in a sense, they are fully depreciated in the current year and have no value. Or it could just overstate the value of some of its physical or nominal assets. This is where watchdogs such as the CBO and GAO would have to be on the alert. The logic of our proposal requires that depreciation be accurately recorded on the operating budget. If it were not, the budget situation could be seriously misrepresented. Understatement of asset depreciation led to the unrecognized deterioration in the financial condition of many state and local governments and various financial institutions.

Transition

How do we get from the current system to our proposed system? Some of our reforms—accrual accounting and separating the capital and operating budgets—could and should be adopted for fiscal 1992. All that is required is that policy-makers look at a different set of books. However, an immediate move to a balanced budget would require enormous and disruptive increases in taxes or reductions in spending. We believe the government should move to a balanced operating budget over a three-to-five-year period. Over this period, the goal of monetary policy should be to

Since aspects of our proposal have been tossed around for some time, we can anticipate two important objections to it. One objection is that it does not accommodate countercyclical policy, and the other is that our proposal would encourage policy-makers to move everything over to the capital budget. Although these objections have some validity, we believe they are not decisive.

We believe the government should move to a balanced operating budget over a three-to-five-year period. Over this period, the goal of monetary policy should be to reduce the inflation rate gradually to zero.

reduce the inflation rate gradually to zero.

Such transition periods have been abused in the past, but we think our enforcement mechanism provides a way to limit future abuses. Specifically, we propose imposing annual limits on the operating budget deficit during the transition period. These limits would be enforced with a sequester. If the limits are exceeded within a given year, then the sequester would require cuts in spending or increases in revenues in the following year. These proposals, combined with the fall 1990 reforms enacted by Congress, would go a long way to reducing the deficit to zero over roughly a five-year span.

It's also possible to frontload the pain of spending reductions and tax increases to a greater extent than is now mandated under the fall 1990 reforms. One major problem with the GRH process was that large deficit reductions were supposed to occur toward the end of the targets, and this problem persists though to a lesser extent with the fall 1990 reforms. When the real pain of deficit reduction is postponed, however, the temptation to revise the targets often becomes irresistible. The only credible way around this problem is to ensure that substantial deficit reduction occurs in the early years of the transition period.

Our Rules Are No Panacea

We would like to conclude by claiming it would be all smooth sailing if only our proposal were accepted. But of course we know that's not true. No change in the process can make the difficult choices confronting policy-makers easy. They still would have to decide whose ox to gore by cutting spending or increasing taxes. But we think policy-makers would make better decisions if they understood what they were up against and what the consequences of their actions would be. No change in budget process is going to solve the policy bias problem or keep the government out of financial difficulty. Better budget processes than the federal government now employs have not stopped these problems with corporations or state governments. We nevertheless strongly believe our proposal can lessen the magnitude of the problems.

Will our proposal work, or is a more drastic measure such as a constitutional amendment necessary? We believe that the situation is not yet so dire as to warrant such an extreme action. Concern over the budget is widespread enough in the nation and among policy-makers that we feel the problems described here can be addressed legislatively.

The budget mess will not be completely cleaned up even if all our reforms are adopted. Hard choices will still have to be made. But we will no longer have the choice of inflicting costs upon future generations for programs that benefit us.

Suggested Readings

On Political Economy:

A classic in the field is...

Downs, Anthony. 1957. *Economic theory of democracy*. New York: Harper Press.

Other excellent readings are...

Buchanan, James and Tullock, Gordon. 1962. *The calculus of consent*. Ann Arbor: University of Michigan Press.

Olson, Mancur. 1971. *The logic of collective action*. Cambridge, Massachusetts: Harvard University Press.

On Agency Theories of the Firm:

Alchian, Armen A. and Demsetz, Harold. 1972. Production, information costs, and economic organization. *American Economic Review* 62, pp. 777-795.

Jensen, Michael C. and Meckling, William H. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3, pp. 305-360.

On Recent Budget Policy:

Miller, Preston. 1989. Gramm-Rudman-Hollings' hold on budget policy: Losing its grip? Federal Reserve Bank of Minneapolis *Quarterly Review* 13, pp. 11-21.

Reischauer, Robert. 1990. Taxes and spending under Gramm-Rudman-Hollings. *National Tax Journal* 43, pp. 223-232.

Schick, Allen. 1990. *The capacity to budget*. Washington, D.C.: The Urban Institute Press.

On Last Fall's Reforms:

Congressional Quarterly staff. 1990. Budget-reconciliation bill. *Congressional Quarterly*, December 1, pp. 4012-4036.

On Proposed Reforms:

Bowsher, Charles A. 1988. Budget reform for the federal government. Statement before the Committee on Governmental Affairs, U.S. Senate, June 7.

Budget reform proposals. 1989. Joint hearings before the Committee on Governmental Affairs and the Committee on the Budget, U.S. Senate, October 18, 26.

Acknowledgements

We wish to thank Rudolph Penner, Alice Rivlin, Mark Sniderman, Eugene Steuerle and John Sturrock for useful comments on an earlier draft.

Statement of Condition (in thousands)

	December 31, 1990	December 31, 1989
Assets		
Gold Certificate Account	\$ 203,000	\$ 198,000
Special Drawing Rights	172,000	153,000
Coin	13,228	12,281
Loans to Depository Institutions	5,495	8,450
Securities:		
Federal Agency Obligations	101,300	109,844
U.S. Government Securities	3,755,330	3,817,846
Cash Items in Process of Collection	364,686	434,312
Bank Premises and Equipment—		
Less Depreciation of \$33,493 and \$27,704	44,079	35,311
Foreign Currencies	978,960	1,002,624
Other Assets	96,005	77,371
Interdistrict Settlement Fund	(188,629)	(405,069)
Total Assets	<u>\$5,545,454</u>	<u>\$5,443,970</u>
Liabilities		
Federal Reserve Notes ¹	\$3,928,662	\$4,146,926
Deposits:		
Depository Institutions	1,027,895	685,999
Foreign, Official Accounts	4,500	4,800
Other Deposits	6,207	30,478
Total Deposits	1,038,602	721,277
Deferred Credit Items	395,132	389,555
Other Liabilities	46,036	51,448
Total Liabilities	<u>5,408,432</u>	<u>5,309,206</u>
Capital Accounts		
Capital Paid In	68,511	67,382
Surplus	68,511	67,382
Total Capital Accounts	<u>137,022</u>	<u>134,764</u>
Total Liabilities and Capital Accounts	<u>\$ 5,545,454</u>	<u>\$5,443,970</u>

¹Amount is net of notes held by the Bank of \$769 million in 1990 and \$856 million in 1989.

Earnings and Expenses (in thousands)

For the Year Ended December 31,	1990	1989
Current Earnings		
Interest on U.S. Government Securities and Federal Agency Obligations	\$ 322,275	\$ 321,299
Interest on Foreign Currency Investments	78,441	33,152
Interest on Loans to Depository Institutions	5,596	6,173
Revenue from Priced Services	40,886	38,513
All Other Earnings	451	476
Total Current Earnings	447,649	399,613
Current Expenses		
Salaries and Other Personnel Expenses	32,901	31,024
Retirement and Other Benefits	7,567	6,648
Travel	1,643	1,382
Postage and Shipping	5,576	5,285
Communications	429	433
Software	2,041	1,510
Materials and Supplies	2,328	2,265
Building Expenses:		
Real Estate Taxes	(512) ¹	2,359
Depreciation—Bank Premises	1,071	1,072
Utilities	862	778
Rent and Other Building Expenses	1,029	965
Furniture and Operating Equipment:		
Rentals	567	600
Depreciation and Miscellaneous Purchases	4,573	4,462
Repairs and Maintenance	2,660	2,461
Cost of Earnings Credits	6,426	7,371
Net Costs Distributed/Received from Other FR Banks	2,103	1,784
Other Operating Expenses	1,689	2,585
Total	72,953	72,984
Reimbursed Expenses ²	(811)	(2,496)
Net Expenses	72,142	70,488
Current Net Earnings	375,507	329,125
Net Additions ³	65,190	41,303
Less:		
Assessment by Board of Governors:		
Board Expenditures	3,094	2,823
Federal Reserve Currency Costs	3,311	3,131
Dividends Paid	4,061	4,026
Payments to U.S. Treasury	429,102	359,912
Transferred to Surplus	1,129	536
Surplus Account		
Surplus, January 1	67,382	66,846
Transferred to Surplus—as above	1,129	536
Surplus, December 31	\$ 68,511	\$ 67,382

¹Reflects a \$1,424 refund of 1989 taxes and a reduction in 1990 taxes.

²Reimbursements due from the U.S. Treasury and other Federal agencies; \$3,893 was unreimbursed in 1990 and \$1,682 in 1989.

³This item consists mainly of unrealized net gains (losses) related to revaluation of assets denominated in foreign currencies to market rates.

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