

TABLE 4. FEDERAL BUILDINGS FUND INVENTORY AND SPACE UTILIZATION, 1976-1982

	1976	1977	1978	1979	1980	1981	1982
USABLE SPACE							
Inventory (In millions of occupiable square feet)							
Office	135.7	137.7	140.7	142.9	141.8	142.5	142.9
Other	<u>96.2</u>	<u>88.7</u>	<u>89.6</u>	<u>87.9</u>	<u>87.1</u>	<u>87.3</u>	<u>87.1</u>
Total	231.9	226.4	230.3	230.8	228.9	229.8	230.0
Percent of Office Space in Government-Owned Facilities							
	51.1	51.2	50.5	50.7	52.0	52.1	51.8
Percent of All Space in Government-Owned Facilities							
	62.3	60.7	60.1	59.5	60.5	60.7	60.3

WORKERS							
Thousands of Federal Workers							
Office	753.6	780.0	794.3	805.5	797.7	822.6	820.5
Special	<u>69.4</u>	<u>63.8</u>	<u>62.5</u>	<u>62.0</u>	<u>62.9</u>	<u>60.5</u>	<u>58.4</u>
Total	823.0	843.8	856.8	867.5	860.6	883.1	878.9
Percent of Workers in Government-Owned Space							
	(50.7)	(50.9)	(50.0)	(50.0)	(51.3)	(51.3)	(50.9)

USE OF SPACE							
Use of Office Space in Square Feet per Worker							
	172	169	169	169	170	167	166

SOURCE: Congressional Budget Office from data provided by the General Services Administration.

The apparent improvement in use of space in recent years seems more a result of GSA's reporting methods than of the fees (SLUCs) paid by employing agencies occupying leased space.^{3/} Experience under the FBF suggests that the slight improvement achieved was attributable largely to central guidance and direction by GSA. In addition, some agencies, such as the Department of Defense, have improved use of space by restricting facility expansion during periods of employment growth. The prospect of incentives from SLUC financing could grow, however, as agencies face tighter budgets and look for ways to reduce operating costs. GSA planners believe that such incentives are already beginning to produce results.

Leasing--a Growing Federal Cost

Under the FBF program, the inventory of all types of leased space increased only about 4.5 percent (from 87.4 million square feet in 1976 to 91.2 million in 1982), while the portion of employees housed in leased facilities remained fairly stable. The costs of annual rental payments, in contrast, increased 65 percent during the same period. The higher rental payments reflect increases in the cost of space per square foot, which rose at an average annual rate of 7.6 percent from 1976 through 1982.

Rental Payments. The increase in rental costs per square foot reflects many factors, notably changes in the type or location of leased facilities, the effects of escalator clauses in lease contracts,^{4/} and the general impact of inflation on the price of new or renegotiated leases. Together, these factors produced an increase in the unit price of FBF leased space comparable, on a nationwide basis, with the general rise in the rate of

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3. See General Accounting Office, GSA's Federal Buildings Fund Fails to Meet Primary Objectives (December 11, 1981), pp. 15-19.
 4. Escalator clauses cover about 60 percent of GSA lease payments and pass certain increases for operating costs on to GSA. The escalator clauses, usually limited to cost increases for higher real estate taxes or for utilities and other building operations, may affect approximately one-fourth of lease costs in buildings serviced by a commercial landlord. According to a recent GAO report, the number of leases with escalator clauses has increased--from 9 percent of the total lease inventory as of May 1978 to 69 percent of the total lease inventory as of March 1982. See General Accounting Office, Use of Escalation Clauses in GSA Leases (November 1, 1982).

inflation. ^{5/} The 7.6 percent average annual increase in FBF lease costs per square foot compares, respectively, to an 8.8 percent average annual increase in the Consumer Price Index (CPI) and a 7.4 percent average increase in the GNP deflator. The increase in FBF unit costs for leasing is not excessive when compared with these and other measures of changes in nationwide rental costs (see overleaf).

Use of multi-year contracts seems to have played a minor role in restraining GSA leasing costs. More than 95 percent of annual lease payments made by GSA go for contracts with firm terms of more than one year. A review of new lease contracts awarded in 1982 shows widely varying initial rates that do not necessarily support a conclusion that multi-year leasing itself is always more economical for the tenant. Rates for three- and five-year leases, for example, average 60 percent more than those for one-year leases. But average rates for leases of ten years and of 11 through 20 years run below those for shorter-term leases (three and five years)--some 11 percent and 39 percent, respectively. Local market conditions and differences in types of space that may affect the lease term categories undoubtedly influence such comparisons, but no clear pattern of savings from multi-year leases emerges. Factors other than savings, however--such as lower administrative workload and avoidance of relocation expenses--argue in favor of multi-year contracts.

Leasing Inventory. The recent relative stability of leased space, both in square feet of inventory and in portion of employees housed, primarily reflects the availability of new government-owned buildings financed through purchase contracts. Since the creation of the Federal Buildings Fund, the portion of leased space has stood at about 40 percent, which is occupied by about half the work force. This pattern contrasts with trends during the ten-year period prior to the creation of the FBF, when the portion of the total inventory composed of leased space increased by nearly one-half.

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5. Nationwide price increases in the average cost of leased space obviously do not isolate wide variations that may occur either in local real estate markets or rates for new leases entered into versus average prevailing rates for all leases in force.

	<u>Percent Increase 1976-1982</u>	<u>Average Annual Rate</u>
Lease Costs to GSA per square foot	58.3	7.6

	Measures of Cost Changes	
CPI	69.8	8.8
GNP deflator	56.7	7.4
GSA survey <u>a/</u>	54.7	7.2
BOMA survey <u>b/</u>	78.5	9.7
Simple average	65.0	8.3

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- a. Reflects change in rates for private-sector space comparable to FBF facilities, as measured by GSA.
- b. The calculations were derived from data published by Building Owners and Managers Association, 1981 Downtown and Suburban Office Building Experience Exchange Report, pp. 14 and 20. The survey of selected office buildings covered different samples each year, ranging in size from 1,132 establishments in 1976 to 1,345 in 1980. The results were extrapolated by CBO to cover the entire 1976-1982 period.

Level of Capital Investment

Budgetary obligations for contracts awarded to construct, repair, or alter federal buildings grew from \$70 million in 1976, to a peak of \$190 million in 1978, declining thereafter to \$160 million in 1982. When adjusted for inflation, however, the level of capital investment has actually declined relative to earlier periods. The 1982 level of \$160 million is--in 1982 dollars--about 70 percent below the average annual level for the 1966-1972 period (before establishment of the FBF) and 13 percent below the average annual level for the seven years of fund's operation.

A shift in the composition of the capital program accompanied the decline in capital investment under the FBF system. In the last three years, 1980-1982, the portion of capital investment going for construction--as opposed to the portion for repair and alteration--increased markedly, averaging 29 percent of the total, in contrast to a 10 percent average for the four years before 1980.

Other Cost Components and Program Reserves

Annual costs for purchase contract payments and operation of FBF facilities are relatively difficult to control and have, along with program reserves, changed markedly since the creation of the fund.

Purchase Contract Payments. The costs (obligations as now recorded) for annual purchase contract payments, under authority that has now expired, increased steadily between 1976 and 1982--rising from \$51 million to \$156 million. About three-fourths of this growth reflects payments covering some 31 projects for which principal and interest payments on purchase contracts commenced during the 1976-1982 period. The remaining increase largely reflects higher costs for earlier projects, including the payment of local real estate taxes. The total amount for taxes being paid for all projects--some 15 percent of PC costs in 1982--essentially represents a transfer of costs from one level of government to another. Such costs would have been borne by local governments in the form of tax revenues forgone.

Facility Services and Program Direction. Costs for servicing federal buildings and directing the FBF program increased some 54 percent during the same period--from \$461 million to \$711 million. Nearly all of the growth resulted from wage increases for federal workers and higher prices for utilities, maintenance supplies, and other materials purchased by GSA. When costs for this component are adjusted for inflation, the annual amount in 1982 dollars declined by some 17 percent over the period, while the inventory of serviced space declined only slightly. The resulting reduction in real operating costs (in 1982 dollars) per square foot derived from several cost-cutting activities undertaken by GSA, including expanded use of contracting with private firms for custodial services (36 percent of obligations in 1976, compared with just under 60 percent in 1982) and economies from energy conservation (saving nearly \$100 million in 1982). 6/

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6. For discussion of the potential federal budgetary effects of contracting out for services, see Congressional Budget Office, Contracting Out for Federal Support Services (October 1982).

Program Reserves. Reserves (unobligated balances) have also grown since the creation of the FBF, both in absolute dollars and as a percent of obligations. Between 1976 and 1982, reserves climbed from \$161 million to \$706 million, or from 13 percent to 34 percent of obligations. Nearly three-fourths of the growth in balances reflects contracts for construction, repair, and alteration projects approved by the Congress but not yet awarded. Some of these uncompleted projects apparently represent scheduling of work for later phases of development--such as drawing plans and obtaining sites, but others may reflect delays effected for budgetary reasons.

FUTURE REQUIREMENTS UNDER THE CURRENT SYSTEM

Assuming no appreciable change in the number of personnel requiring GSA-administered space or in the amount of average office space assigned to each worker, the inventory of all space is projected to decline from the present 230 million square feet to 223 million square feet in 1988. This slight decrease reflects estimated declines in space for storage and other special facilities, resulting mainly from the disposal of obsolete properties. The overall inventory of office space, in contrast, would remain fairly stable, although its composition would change. As projects now under construction are completed, the portion of the federal inventory consisting of leased space will drop from today's 50 percent to 44 percent.

Under the projected baseline inventory, increases in new obligational authority to fund the federal buildings program would accumulate to some \$3.6 billion through 1988 (see Table 5). Somewhat more than half of the increases derive from estimated higher unit prices for capital investment, rent, and other costs paid by GSA, and the remainder would come from an expanded construction, repair, and alteration program. (Because of Congressional interest in future FBF requirements, estimates in this section represent new obligational authority as currently recorded. They are presented as a reference point for estimating savings under the alternative planning assumptions and should not be confused with those in the President's budget or GSA's own planning documents.)

Capital Investment. As in the past, the level of capital investment (construction, repair, and alteration of all types of space) scheduled for a particular year is constrained by income from SLUC collections left over after annual requirements for leasing and other costs are met. (The individual proposals that make up the total program level reflect project-by-project justification.) Because SLUC collections are estimated to increase at a faster rate than most costs, the level of capital investment is projected by CBO to increase markedly--from \$0.2 billion to \$0.7 billion between 1983 and 1988. In 1983 dollars, the projected average annual level of \$0.5 billion

TABLE 5. PROJECTED BASELINE INCOME AND COSTS FOR FEDERAL BUILDINGS FUND, 1983-1988 (In billions of dollars)

	1983	Projected					Total
		1984 ^{a/}	1985	1986	1987	1988	
INCOME							
SLUC and Other Income	1.77	2.18	2.45	2.67	2.94	3.12	13.36

NEW OBLIGATIONAL AUTHORITY							
Construction ^{b/}	0.08	0.14	0.27	0.27	0.38	0.41	1.47
Repair and Alteration ^{b/}	<u>0.16</u>	<u>0.16</u>	<u>0.22</u>	<u>0.23</u>	<u>0.29</u>	<u>0.33</u>	<u>1.23</u>
Subtotal	(0.24)	(0.30)	(0.49)	(0.50)	(0.67)	(0.74)	(2.70)
Leasing	0.77	0.88	0.95	1.04	1.12	1.15	5.14
Other Costs ^{c/}	<u>0.92</u>	<u>0.97</u>	<u>1.03</u>	<u>1.08</u>	<u>1.13</u>	<u>1.19</u>	<u>5.40</u>
Total	1.93	2.15	2.47	2.62	2.92	3.08	13.24

SOURCE: Congressional Budget Office from General Services Administration data.

- a. Baseline costs for 1984 reflect a slightly different distribution of costs among program components than that contained in the President's current budget estimates.
- b. Estimated new obligational authority for construction, repair, and alteration excludes costs of projects approved in prior-year budgets. The estimated level of construction, but not the selection of particular projects for a given year, largely derives from the amount of SLUC income remaining after funding the other FBF components. Because CBO estimates less inflation for some FBF costs, the amounts available for construction are greater than GSA estimates indicate. The estimated level for repair and alteration excludes associated operating expenses which are included in the other costs category. Also excluded is the impact of additional appropriations provided under the Emergency Job Appropriations Act (Public Law 98-8).
- c. Includes costs for annual payments for purchase contracts, operation of public buildings, and overall program direction. Estimates of operating expenses for the FBF substitute a CBO price inflator for the GSA rate. The CBO substitute reflects slightly lower projected increases in energy costs and federal employee wages.

for the 1984-1988 period is almost 175 percent greater than that experienced in the past. The following paragraphs describe baseline projections concerning SLUC collections, leasing, and other noncapital components.

User-Charge and Other Collections. Annual revenues to the FBF account from SLUC and other sources are estimated to increase from \$1.8 billion to \$3.1 billion between 1983 and 1988. About one-fourth of the annual increase anticipates discontinuation of the 1983 freeze on SLUC collections. Most of the remainder, more than two-thirds of the annual increase, adjusts for the estimated higher unit rental prices that will be paid in the private sector for comparable commercial space--the basis for setting SLUCs. The higher unit prices, rising at an average annual rate of 8 percent (1984-1988), incorporate price changes caused by many factors: market adjustments for prior-year inflation not built into multi-year leases; changes in the type, quality, and location of the GSA space; and annual inflationary increases on private-market lease rates.

Rental of Space. Under baseline assumptions, annual rental costs are projected to increase from today's \$0.8 billion to \$1.2 billion in 1988. This increase reflects additional costs accumulating over five years to some \$1.3 billion because of higher unit prices for rented space. The price increases result from the effects of three factors: general inflationary pressures on future prices, changes in the composition of the leased inventory by geographic area and by type and quality of space, and most important, the high cost of renewing or renegotiating multi-year leases. (For estimating purposes, CBO projects the unit price for new leases to be about twice that of the average unit price for leased space already under contract.) Overall, the annual increase in unit prices for new leases is projected to average about one-third higher than the rise in the rate of inflation as measured by the GNP deflator.

Other Costs. The annual costs for purchase contract payments, operation of facilities, and program direction are projected to increase from the present \$0.9 billion to \$1.2 in 1988. The increase mainly reflects higher wages for federal employees operating FBF facilities and higher prices for utilities and supplies.

ALTERNATIVE PLANNING ASSUMPTIONS

The level of future FBF program activity will reflect Legislative and Executive Branch actions affecting the size of the work force housed in government facilities and the efficient use of space. This section identifies

alternatives that illustrate the impact of different assumptions contained in released GSA plans for the FBF regarding the size of the work force and the use of space. The impacts described are measured against a current system baseline that reflects no changes in these two variables. Three specific alternatives to baseline assumptions are examined:

- o A 12 percent reduction in work force size;
- o A 19 percent reduction in office space assigned to each worker; and
- o Reductions in both the work force and the space assigned to each worker.

Savings Estimates. The three planning alternatives offer cumulative outlay savings through 1988 that range from \$0.7 billion to \$1.8 billion (see Table 6); but two rely on actions in the Executive Branch that may run counter to present GSA planning. The CBO-estimated savings incorporate cost reductions--relative to the current baseline--that derive from reduced leasing, some leasing out of federally owned space to nonfederal tenants, as well as lower cleaning, guarding, and other operating costs.^{7/} The planning alternatives assume no impact on costs for construction, repair and alterations, leasing and operation of special-purpose facilities, and payments for prior-year purchase contracts. The resulting savings under the various options could be applied to either augmenting FBF capital investment or to reducing the federal budget deficit.

For estimating purposes, the reductions in the inventory under alternative work force and space use assumptions would be gradually phased in through 1988 and distributed between leased and government-owned space according to the relative proportion of each under the current

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7. Savings from reduced leasing would fall within 9 percent of the leased inventory that, on average, becomes available each year for renewal or renegotiation at the average cost of such space. (GSA assumes much lower lease savings at the prevailing average rate for all space.) Savings from leasing out assume that half the available space would be leased at rates equivalent to 75 percent of what GSA pays for new leases. Put another way, the CBO estimates assume that GSA will recoup about 37 percent of the marginal value of vacated space; using different assumptions, GSA estimates about 30 percent of cost will be recouped.

TABLE 6. ESTIMATED SAVINGS UNDER ALTERNATIVE PLANNING ASSUMPTIONS FOR GOVERNMENT WORK SPACE, 1984-1988 (Outlays in billions of dollars)

	1984	1985	1986	1987	1988	Total
CURRENT SYSTEM						
Baseline Costs	2.14	2.47	2.61	2.93	3.08	13.23
----- ALTERNATIVES						
Reduced Work Force Size	0.02	0.09	0.14	0.19	0.25	0.69
Reduced Space per Worker	0.04	0.18	0.25	0.34	0.43	1.24
Reduced Work Force Size and Space per Worker	0.06	0.26	0.39	0.51	0.64	1.85

SOURCE: Congressional Budget Office.

NOTES: Detail may not add to total because of rounding. The savings estimates would shrink by about one-third if certain GSA assumptions were substituted for CBO assumptions, including those covering the unit price of leased space, the distribution of inventory reductions between leased and government-owned space, and the portion of vacant space that can be leased out.

system. ^{8/} Even with these allowances, the estimated potential savings will be achieved only by careful planning that recognizes the difficulty of

8. The estimated inventory reductions assume phased implementation of recent regulations governing utilization of office space by federal agencies and GSA planning for changes in work force size. The proportional distribution of reductions between leased and government-owned space differs from GSA planning assumptions that take

relocating federal activities and personnel. (The baseline and alternative estimates assume completion of capital investment projects approved in prior-year budgets.)

Assumption III-1--Reduction in Work Force Size

In contrast to the baseline projections, this alternative reflects implementation of a 12 percent reduction in federal personnel working in GSA facilities through 1988. ^{9/} The force reduction, totaling some 92,000 workers over five years, follows past efforts to trim the federal work force--at least in nondefense agencies--and GSA planning assumptions. As a result of this reduction, annual requirements for office space would decline from the baseline projection by some 16 million square feet by 1988. The reduction in office space is assumed to have little impact on the distribution of federal employees located in leased and owned facilities; but some 8.5 million square feet of government-owned space would no longer house federal activities and thus would become available for leasing to nonfederal tenants.

Between 1984 and 1988, savings under this planning alternative would grow from about \$20 million to \$0.2 billion, for a total five-year savings of \$0.7 billion. Upon full implementation after 1988, annual savings would exceed \$0.3 billion. Considerations other than savings might weigh more heavily in evaluating work force reductions, including the cost and programmatic impacts of operating the government's nondefense activities, the hardships caused workers who might be laid off, the effects on morale, and the short-term costs of reductions in force. ^{10/} Such factors have undoubtedly influenced the Administration's 1984 budget decisions that show a

most of the inventory reductions from the portion that is leased. Thus, savings estimated by CBO would increase under GSA assumptions that space reductions can be taken primarily from leased space.

9. The assumed 12 percent workforce reduction, averaging some 2.1 percent per year, is phased in at 3.6 percent and 2.5 percent annual decrements for 1984 and 1985 and an average 1.9 percent decrement for each of the remaining three years.
10. For a discussion of the costs of federal layoffs, see Congressional Budget Office, Cost of Potential Layoffs Under the Administration's Employment Reduction Program (July 1981).

relatively stable civilian nondefense work force through 1985.^{11/} Such budget estimates argue against adopting, for plan-planning purposes, the more stringent work force assumptions in this alternative.

Assumption III-2--Reduction in Space Per Worker

This alternative assumes more austere use of office space, as reflected in recently issued GSA regulations governing tenant space requirements. For estimating purposes, the amount of office space assigned per worker would fall 19 percent by 1988--from 167 square feet estimated under the current policy baseline to the GSA target of 135 square feet, with a minimum first-year reduction of 10 percent for most agencies.^{12/} As a result, the estimated annual requirement for office space would decline by 26.4 million square feet for 1988. Under the CBO estimates, this alternative plan would not appreciably change the mix of personnel housed in leased and government-owned facilities in the short run. As in the work force reduction alternative, excess federal space would become available for outleasing, and in fact, in greater quantities.

Savings from the reduced space per worker are estimated by CBO to total \$1.2 billion over five years, growing from less than \$50 million to \$0.4 billion between 1984 and 1988. Annual savings thereafter would exceed \$0.5 billion. Experience under FBF indicates that reductions in the use of space are hard to achieve and require strong central guidance and direction. Achieving a target of 135 average square feet per worker will require agen-

11. According to the Administration's special analysis of civilian employment in the Executive Branch, the nondefense work force is slated to decline from the actual 1982 level of 1.098 million to some 1.084 million for 1985. See Special Analysis, Budget of the United States, Fiscal Year 1984, p. I-2.
12. On March 8, 1983 GSA issued regulations that prescribe policies and procedures for improving the cost effectiveness of agencies' use of space. Comments on the regulations may be submitted any time prior to June 30, 1983 to insure their consideration in the drafting of the final regulation. See Federal Register, Volume 48, Number 46, March 8, 1983, p. 1982. These regulations rely on GSA's statutory authority, but they have been reinforced by an executive order that sets procedures for agency use of space in more general terms. Executive Order No. 12411, Government Work Space Management Reforms (March 29, 1983). See Federal Register, Volume 48, Number 63 (March 31, 1983), p. 13391.

cies to undertake active space management programs. ^{13/} Space reassignment would undoubtedly disrupt some ongoing agency operations in the near term, however, resulting in temporary losses of productivity and morale. Finally, annual savings from space economies materialize only gradually because of initial requirements for relocation, space alteration, and cancellations of leases or the outleasing to nonfederal tenants.

Assumption III-3--Reductions in Work Force and Space Per Worker

This planning alternative--the most stringent of the three--assumes implementation of both the work force and space reductions set forth in the previous two options. Through 1988, the combined effect would reduce the requirements for office space by 39 million square feet, or 28 percent; some 21 million square feet of government-owned space will be vacated. The mix of employees housed in owned versus leased space, however, would not change appreciably for some time.

This plan offers the greatest potential money savings among the three alternatives--accumulating to some \$1.8 billion by 1988. Savings would grow from about \$60 million in 1984 to \$0.6 billion in 1988. Annual savings thereafter would exceed \$0.8 billion. (The five-year savings could be augmented by more than two-thirds if the option were modified to include a freeze on new construction, although certain long-term economies associated with construction of federal buildings, as discussed in Chapter IV, would be deferred.) Despite the appeal of such high savings, adopting these planning assumptions would involve considerable risk of budgetary shortfalls, should the assumptions understate future requirements. At present, work force reductions are not implicit in other budget decisions, and past experience suggests that sustained improvements in the efficient use of space are difficult to obtain.

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13. Examples could be found in the Department of Agriculture, the Department of Defense, and the General Services Administration, which, respectively, have produced utilization averages in Washington, D. C. of 155 (Agriculture/South Headquarters), 125 (DOD/Pentagon), and 135 (GSA/Central Office Building).



CHAPTER IV. LEASING VERSUS NEW CONSTRUCTION

In the past several years, many legislators have expressed concern that the General Service Administration's current system for acquiring space biases choices toward leasing, and as a result, the federal government fails to capture the longer-term economies of building and owning its own facilities. (Construction, though costly while under way, and especially so for the federal government, offers potential long-term savings.) This concern stems in part from the sharp decline over the past two decades--from 82 percent to 50 percent--in the portion of federal employees working in government-owned facilities. Although this decline occurred prior to creation of the Federal Buildings Fund, increased reliance on leasing continues to be a subject of debate.

The CBO analysis, reviewed in this chapter, finds that several aspects of the decisionmaking process do indeed skew choices in favor of leasing. After recapitulating the recent legislative proposals to correct this bias, the chapter identifies several critical considerations that influence lease-versus-ownership decisions. The chapter closes with three options for moderating the biases in the present system.

RECENT LEGISLATIVE BACKGROUND

In 1980 and 1981, the Senate passed two bills (S. 2080 and S. 533) aimed partly at correcting what it believed to be GSA's excessive spending for rental of commercial facilities and inadequate funding for federal construction. Both proposals would have required adoption of a new system for annual authorization and budgeting of public buildings projects, a long-range planning process for meeting federal space needs, and an eventual goal to increase the portion of federal personnel occupying government-owned, rather than leased, quarters. The 1981 bill, S. 533, also included provision for the full funding of multi-year leases. A subsequent Senate bill, S. 2451, contained only the annual authorization and budgetary provisions of S. 533, but the sponsors of S. 2451 believed that the mandated

changes specified in the bill would accomplish similar objectives. Related legislation is now under consideration by the Senate as S. 452. 1/

BUDGETARY BIASES THAT FAVOR LEASING

The current structure of the FBF exhibits a pro-leasing bias that reinforces more widespread biases resulting both from general fiscal pressures to limit spending government-wide in the short run and from deficiencies in long-range planning for federal space needs. These more pervasive biases operate independently of the particular budgetary structure of the federal buildings program. (The relative costs of leasing versus construction are examined later in this chapter.)

Structural Bias of the Federal Buildings Fund

The structure of the FBF account has been cited as fostering reliance on leasing. Critics of present FBF accounting methods point to two factors: the partial funding of multi-year leases, and the reliance on Standard Level User Charge financing for capital investments and other FBF activities.

Funding of Multi-Year Leases. As discussed in Chapter I, lease obligations and new obligational authority represent annual lease payments only, not full contractual commitments for such undertakings as construction. With the full costs of multi-year leases unrecorded when the contracts are entered into, the leasing choice seems more attractive from a budgetary viewpoint. To meet space needs, the Congress and the Administration now can either deplete the FBF in the short term through commitments for construction or ease the burden on the fund by spreading out costs (obligations) through use of leasing. Some observers see full funding as the solution to this bias; accounting for full lease commitments in the first year of all contracts entered into would end the short-term accounting advantage of leasing. But this would have the near-term effect of depleting the funds available for new construction. Such a change in accounting would not affect budgetary outlays--that is, disbursements to commercial landlords.

Resources Available from User-Charge Financing. The constraint on FBF expenditures resulting from the link to SLUCs can prevent attempts to convert from leased to government-owned space within the FBF system. Given available resources, in fact, the fund would have been virtually unable

1. Sponsorship of these bills has come from both sides of the aisle in the Senate, with S. 2080 put forward by Senator Moynihan (D-N.Y.) and S. 533, S. 2451 and S. 452 by Senator Stafford (R-Vt.)

to support a much higher level of construction and thus significantly reduce GSA's dependence on commercial leasing. In theory, if GSA had planned more new construction to accommodate half the leased office space contracted for since the creation of the FBF, the SLUC resources of the fund would have been depleted, and some \$0.6 billion of additional capital would have to have been appropriated by the Congress. Such appropriations have been rare in the past, and they have only been made available for special needs. (This estimate assumes that construction costs of \$0.9 billion for some 21.5 million square feet of space would have been partly financed by some \$0.3 billion both from balances in the fund and from reductions in leasing costs through 1982.)

It is impossible to isolate the extent to which a bias in the budgetary structure of the FBF program--accounting practices and SLUC limits on expenditures--has diminished the level of capital investment. But even without such constraint, other biases in governmental decisionmaking have contributed to GSA's increased reliance on leased property for meeting federal office-space requirements.

Fiscal Pressures

Under any federal program, budgetary decisions about the level of capital investment may be influenced by a desire to minimize near-term spending. Thus, the obviously lower annual outlays for lease payments (regardless of how obligations are recorded) look initially more attractive than investing in new construction, which always entails substantially higher near-term outlays. This intrinsic fiscal bias may be especially strong when large annual budget deficits and rapid inflation coincide. With regard to high inflation, the leasing of commercial space usually entails purchasing access to already-constructed buildings that created demand on construction resources in earlier years.

In the ten years preceding the establishment of the current FBF system, budgetary controls--albeit often short-lived--were invoked by different administrations to cut back or freeze the level of new construction starts. During this time, however, no such budgetary action has been taken to limit the level of leased space directly, which is usually the residual resource available to GSA for meeting the space requirements of federal agencies. Since creation of the FBF program, general budgetary pressures seem to have restrained the level of obligational authority approved by the Congress.

Reliance on leasing appears nonetheless to have stabilized since the start of the FBF system, but this may be attributable not so much to SLUC

financing as to inventory additions of government-owned buildings under now-expired authority for purchase contract financing. If the space requirements met by PC projects had instead been filled through increased leasing of commercial space, the percentage of personnel housed in leased facilities would have increased to 54 percent--leaving 46 percent in government-owned space. Though the mix of leased and government-owned space may have stabilized with the advent of PC financing, budgetary restraints may still have prevented a further growth of investment in new construction.

Long-Range Planning. In the past, general budgetary and fiscal pressures may have been accompanied by biases resulting from GSA's lack of effective, long-range planning. Only realistic program assumptions and comprehensive assessment of priorities can ensure implementation of GSA's key long-range goals. Without such planning, meeting future space needs by construction is difficult because of the long lead time required for planning, design, and actual building. As a result, the leasing of buildings already constructed has been necessary to meet unanticipated space requirements. In addition, GSA's most recently published long-range plan, prepared for the 1984 cycle, appears also to have been influenced by pressures to restrain spending in the short run. ^{2/} The proposed program for construction, repair, and alterations accelerates sharply in the out years, 1984 through 1988. For instance, the real level (in 1984 dollars) for the last year of the five-year cycle is about one-half higher than the level in the first year. (Chapter II describes weaknesses cited in GSA's long-range planning and the relationship to the authorization and budgeting process.)

BIASES IN COST COMPARISONS

Regulations set down by OMB also influence space acquisition decisions. Before GSA submits a proposal to the Congress for acquiring additional space, guidelines in OMB circulars require a "present-value" comparison of the options available such as leasing, or government ownership through purchase of existing facilities or new construction. Critics charge that, in the interest of short-term budgetary advantage, the OMB has systematically skewed the specifications in these guidelines. ^{3/}

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2. See General Services Administration, Public Buildings Service Management Plan, pp. 29 and 51.
 3. Report of the Committee on Environment and Public Works, U.S. Senate, The Public Buildings Act of 1981 (April 30, 1981), p. 6.

Present-value analysis allows comparison of all economic costs under different methods of obtaining space. Present-value analysis is predicated on the assumption that, over time, money has earning power. A dollar available today is worth more than a dollar available next year, and conversely, waiting to spend a dollar until next year offers an opportunity to use the dollar productively in the meantime. Alternative acquisition investments, such as leasing or construction, will normally incur different costs at different times. To make a comparison, the costs at varying moments must be reduced to a common basis. The measure usually chosen is the present value.

The discount rate--a key factor in present-value analysis--is used to value the resources made available or forgone under the various methods of obtaining space. Specifically, it represents a relevant interest rate, or real rate of return, assigned to whatever money would or would not be available for other purposes.

Choosing the Discount Rate

What an appropriate discount rate would be is subject to considerable uncertainty. The higher the discount rate, the lower the cost of the leasing option relative to construction, because a high discount rate reduces the present value of dollars spent in the distant future (as under leasing) more than a low discount rate does. Calculated for Circular A-104 by OMB in 1972, current guidelines prescribe a 7 percent rate, which is intended to reflect the internal real rate of return on general-purpose real property leased from the private sector.^{4/} Data do not exist to replicate or evaluate in detail the basis for that particular discount factor. (However, a review of historical data used by mortgage bankers to make loans for office building investments suggests expected real rates of return of 5 percent or possibly

4. The 7 percent discount rate, stipulated in 1972 in OMB Circular A-104 (Section 4f) was apparently adapted from analysis of rates of return on assets in all sectors of the economy by J.A. Stockfish, Measuring the Opportunity Cost of Government Investment, published by the Institute for Defense Analysis (March 1969). As noted in the Economic Report of the President (February 1983), p. 84, real returns on corporate capital for all sectors combined have ranged between 8 percent and 15 percent since 1945. In recent decades, returns for private investors have been much lower and at times, even negative. The large difference between the total and private returns on investments is attributable to taxes, which extract a portion of the total return on private investment.

much lower on such assets. 5/) The General Accounting Office (GAO) has criticized the underlying basis for the OMB rate, claiming that it sets the discount rate too high, and therefore biases comparisons in favor of leasing.

Review of GAO Criticism. In 1975, GAO recommended that the discount rate stipulated in Circular A-104 be replaced by the average yield (net of current inflation) on outstanding long-term marketable obligations of the U.S. Treasury. 6/ If applied in 1979, the GAO recommendation would have lowered the real discount rate to about 0.2 percent and would have pushed up the cost for leasing relative to that for new construction. Historically, the overall cost of Treasury borrowing has been such that adoption of the GAO recommendation would lead to a real discount rate markedly lower than the 7 percent rate in the OMB guidelines, and thus it would increase the number of comparisons showing construction as more economical. The real rate of federal borrowing for either the short or long term has averaged less than 2 percent over the past 20 years. (These historical estimates of real borrowing costs derive from nominal rates less the actual change in the GNP deflator, and they do not attempt to adjust for anticipated inflation.)

In essence, the respective OMB and GAO positions on an appropriate discount rate represent two different perspectives on the alternative opportunities made available or foregone by government investment. The OMB approach recognizes that government investments of capital mean that fewer resources are available for investment in the private sector. Because the GNP would be lower if the government invested in projects with below-market rates of return, the discount rates now prescribed ought to value federal resources at the same rates as they do private-sector investments. The GAO, on the other hand, prefers a discount rate based on the cost of borrowing by the U.S. Treasury to select the least expensive method for the government to acquire space. Analysts at GAO believe that long-term Treasury borrowing rates offer a more appropriate basis for discounting,

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5. A CBO analysis of financial data reported by the American Council on Life Insurance shows expected real rates of return on office buildings (borrowed capital and equity combined) averaging from 0.8 percent to 5.2 percent for the 1966-1982 period. The difference depends largely on how the cost of obsolescence is treated and to a lesser extent, on how expected inflation is estimated.
 6. See General Accounting Office, Improved Procedures Needed for Justifying Lease Acquisitions of Federal Buildings (February 13, 1975) and General Services Administration's Lease Versus Construction Present-Value Cost Analyses Submitted to the Congress Were Inaccurate (June 20, 1980).

since the discount rate represents the value of federal resources rather than the value of private-sector resources. 7/ This latter approach is appropriate if the government is seeking, as a private investor might, simply to maximize its own financial position, rather than the efficient allocation of resources in the economy as a whole.

If a present-value analysis uses a discount rate based on government borrowing (as GAO recommends), then it creates a bias in favor of capital investment--such as constructing a federal office building. The bias occurs because government borrowing rates are lower than those paid in the private sector that help finance private ownership of office buildings and that thus show up in rental costs. Under the GAO approach, an incongruity emerges. The rental rates on a lease include the private investor's cost of financing at higher borrowing rates; if these rates are discounted for present value at the lower federal borrowing rates, the result is an overstatement of leasing costs. The appropriate rate must discount the cost of capital actually experienced in the private sector, since that is the alternative use of resources, regardless of the option taken. Use of low federal borrowing rates tends to encourage inefficient use of scarce capital.

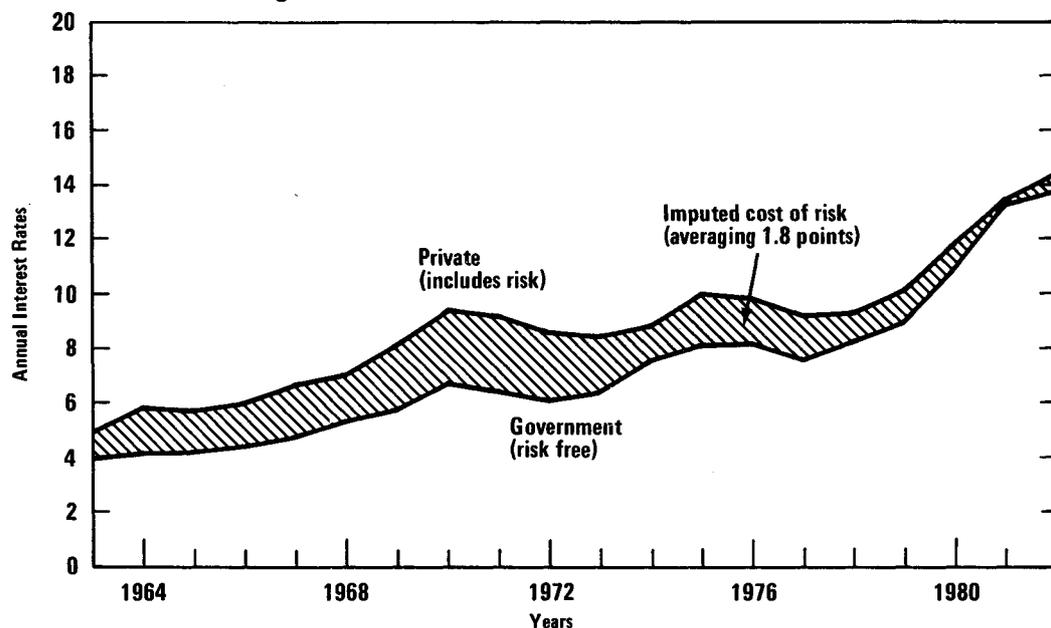
Constructing an Appropriate Discount Rate. Treasury borrowing rates are lower than private rates of the same maturity, primarily because private enterprises are subject to the risk of financial failure. 8/ When federal borrowing rates are used to evaluate projects, there is an implicit assumption that the risks of failure should be borne by taxpayers. For present-value discounting in lease-versus-construction decisions, adding a risk factor to federal borrowing rates would end an inefficient bias in favor of capital investment. An approximation of this difference between private-and public-sector borrowing rates can be captured by comparing long-term Treasury borrowing rates against private-sector rates for new mortgage commitments to finance commercial office buildings. Over the past two decades, this difference averaged almost 2 percentage points (see Figure 1). Assuming that the same expected inflation rates influenced both markets to the same degree, this means that the differential is a relatively pure measure of market risk in the mortgage commitments area.

An appropriate real discount rate for the purpose of FBF lease-versus-construction comparisons would be the sum of the added factor for risk and

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7. See General Accounting Office, Internal Handbook, Chapter 20, pp. 20-1 through 20-16 (July 1, 1974).
 8. In addition, the depth and breadth of the market for Treasury securities make them more "liquid" (readily convertible into cash) than most private debt obligations.

Figure 1.

Imputed Cost of Risk in Private-Sector Borrowing for Office Buildings, 1963-1982



SOURCE: Derived by Congressional Budget Office from public and private data.

NOTES: **The risk-free government rates** are derived from reported annual yields on outstanding U.S. securities at constant maturities of 20 years. **The private rates** derive from loan commitments of \$100,000 or more on commercial office buildings, as reported to the American Council of Life Insurance Companies by some of its members. The rates in 1966 and beyond reflect weighting based on the dollar amounts of reported loan commitments; in earlier years, weights were based on the number of commitments reported. **The imputed risk factor** may be somewhat understated because the loan commitments for private rates do not include the additional yield (unquantifiable) from discounts, fees, or allowance for return from any participation in equity or from any sharing of rental income. Although such factors have become more important in recent years, the imputed risk factor would still average about 2 percent if the analysis excluded the last four years. In addition, the possible underestimate of risk costs may be minimal because the rate on loans placed cannot exceed the commitments but, in some cases, may be lower.

a measure of the (risk-free) real rate of interest. The CBO has estimated the latter by subtracting the annual rate of inflation as measured by changes in the GNP deflator from the average real annual yield on three-month Treasury bills over the period 1963-1982. 9/ When these real federal borrowing rates incorporate a risk factor, the resulting proxy rate averages nearly 3 percent over the past 20 years. 10/ Obviously, a risk-adjusted real rate may change in the future, but historically, the estimated rate exceeded 5 percent in only one case. (Under CBO near-term budget projections, the method used in this paper would produce a discount rate of 4.5 percent in 1984 and 3.9 percent in 1988, although the implications of these near-term projections on historical averages are most uncertain.)

The 7 percent discount rate stipulated by OMB differs from the CBO imputed 3 percent rate because OMB's rate intends to represent internal rates of return in private-sector property operations, rather than approximate private-sector borrowing costs. Many economists favor a discount rate based on rates of return on privately held assets to evaluate the costs of government investment. Used in GSA lease-versus-construction decisions, the 7 percent rate creates a bias toward long-term investment. Lease rates would include the private-sector cost of financing; but when the federal costs of leasing are discounted for present value at the higher OMB rate, the out-year costs are understated. This seems to encourage inefficiencies in purchase-lease choices by biasing the results toward out-year costs, such as those incurred in a leasing agreement.

THE ECONOMIES OF FEDERAL OWNERSHIP

When comparing both cash effects on the FBF budget and present values, the CBO analysis confirms that, in many cases, construction seems

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9. By calculating the real rate of interest for such short-term investments, the requirement that "expected inflation" be deleted is approximately met because actual and expected inflation cannot differ materially over such a short period.
 10. Use of the three-month Treasury bill rates presents a somewhat incomplete picture of real borrowing costs, because private-sector capital investments are not typically financed by such short-term rates. (In the federal government, by contrast, specific debt issues are not ordinarily assigned to particular governmental activities or types of projects.) Undoubtedly, differences between expected inflation account for much of the difference between short- and long-term rates. To the extent that other considerations account for some of the difference, however, the 3 percent discount rate may be understated.