This chapter begins by explaining the general principles under which universities recover facilities and administrative costs, the formal procedures for calculating F&A costs and negotiating F&A cost-recovery rates, and the methods for calculating how much of federal R&D outlays go to F&A costs.

There are limits set by statute and agency policy on universities’ ability to recover costs from the federal government for F&A spending on government-funded research. By contrast, commercial firms that do business with the federal government generally can recover the full costs of government-related business expenses. Historically, the underlying reasons for limiting universities’ cost recovery were that they have a public interest mission to advance knowledge, that research and education are linked, and that the relationship with the federal government is a partnership. Principal investigators in universities proposed research agendas, some of which the government supported through grants. Therefore, it was argued, the university should use other sources of funds to supplement government grants. One historical survey summarized the development of the financial relationship between the federal government and universities:

At the outset, the federal government provided research funds to universities on terms markedly different from those governing relations with industry. Whereas industrial firms were eligible for reimbursement of full audited costs, universities were permitted to recover only a fraction of their indirect costs. The theory was that since research was a regular function of universities, some of the university’s own budget should go to the support of the research performed by its faculty, whatever the source of that support. The earliest NIH reimbursement rate for indirect costs was 8 percent. As federal subvention increased, however, the universities argued that they were in effect subsidizing government in ever larger degrees. In response, the regulations were changed to permit reimbursement of 20 percent of indirect costs and finally, in 1965, by act of Congress, the policy was changed to provide for a negotiated reimbursement of costs, but not full reimbursement.
The principle adopted was that of "cost-sharing," a notion growing out of the original assumption that some of the charge for university research ought to be borne by the university. (Lakoff, 1978, pp. 173–174.)

When research was a relatively small enterprise, universities could more readily share the costs with the federal government. These modest cost shares did not affect universities’ ability to perform their other missions, including teaching and public service. When the research enterprise grew, although universities were willing to continue to share costs, they argued that they could not share costs at the same rate as when the enterprise was smaller. The absolute value of the university share in research may have increased, even though the percentage of the share was declining. In a sense, the greater federal share for facilities and administrative costs is a marker of the success of the university-government partnership in research.

There were other changes during this period after World War II. The federal government developed cost principles specific to colleges and universities, recognizing that they perform several distinct but related services. Higher education institutions perform teaching, research, and public service. As noted in Chapter One, each of these activities may share some common resources such as buildings and central management. F&A reimbursement rules provide for how these common costs are allocated to the various functions they support.

GENERAL PRINCIPLES FOR ALLOCATING COSTS

In order to compute an F&A rate for a college or university, costs are divided into three categories, as illustrated in Figure 2.1. We summarize the definitions of the major cost categories here.

- **Direct Costs:** Costs closely tied to a specific project are termed “direct costs.” These include salaries for scientists and wages for project team members. In addition to salaries and wages, direct costs also include materials and supplies used in the course of a project. Other direct costs include travel, project-specific equipment, and subcontracts to other organizations.

- **Exclusions:** When projects incur costs for equipment or for payments to subcontractors, these costs must be separated from direct costs. In computing F&A rates, costs for subcontracts over a certain threshold (currently $25,000) and equipment must be separated from direct costs, as shown in Figure 2.1. There are a few other exclusions, but equipment and subcontracts are the most important. The direct costs minus the exclusions are called “modified total direct costs (MTDC).”
• **Facilities and Administrative (F&A) Costs:** F&A costs include shared expenses related to facilities or administration of the university. Office of Management and Budget Circular A-21, discussed below, provides definitions for which costs are to be included in facilities and administration.

*Facilities* costs are

- allowances for depreciation and use of buildings and equipment,
- interest on debt associated with buildings and equipment placed into service after 1982,
- operation and maintenance expenses (such as janitorial, utility, repairs, security, environmental safety, and insurance), and
- library expenses (library operations and materials purchased for the library).

*Administrative* costs are

- general administration and general expenses (such as central offices for the president, financial management, general counsel, and management information systems),

![Figure 2.1—Allocating Costs](image-url)
• departmental administration (including academic deans, faculty administrative work, secretaries, and office supplies),

• sponsored-projects administration (a separate office that administers contracts and grants), and

• student administration and services (operations of student affairs, deans of students, registrar, advising, and counseling), which are normally excluded or limited when computing rates for research.

MTDC, rather than total direct costs, forms the base for calculating F&A costs to projects. The term “base” is also used as a synonym for MTDC because MTDC is the base for distributing F&A costs. MTDC has come to be the accepted base for allocating F&A costs because the direct costs are considered a reasonable indicator of how much benefit the project is deriving from the shared facilities and administration. Because subcontracts and equipment can involve very large expenditures and yet do not necessarily take much advantage of the university’s infrastructure, they are excluded from MTDC to compute the base. Other bases are commonly used in nonprofit and for-profit organizations. The discussion below indicates that universities with small volumes of sponsored projects are permitted to use a base of salaries and wages only to allocate shared costs.

As noted, costs for F&A that would be difficult to assign to a specific project are pooled to compute total F&A costs. A university’s total F&A rate is computed by dividing F&A costs by MTDC. As the pie chart shows, F&A costs may account for only about one-quarter of total costs, but the F&A rate is a different number because it is the ratio of F&A costs to MTDC. F&A rates of about 50 percent of MTDC are typical of universities. A common misunderstanding is that a 50 percent F&A rate means that 50 percent of total expenditures are for overhead. That is not the case.

If there were no exclusions from direct costs (such as equipment and subcontracts), then all costs would be either MTDC or F&A costs. In that case, a typical 50 percent F&A rate would mean that for each $100 in MTDC, $50 in F&A costs would be allocated. The $50 in F&A costs out of a total budget of $150 means that one-third of project costs are F&A costs in this case. If, in addition, the project incurred costs for large subcontracts or equipment, there would be additional direct costs. In that case, the fraction of project costs for F&A would be lower than one-third. In an extreme case, a grant that funded only equipment purchases would incur zero F&A costs. Based on these cases, a typical 50 percent F&A rate means that between zero and one-third of total project reimbursements are for facilities and administration. In a later section, we use two methods to calculate the average share of F&A reimbursements in total federal outlays for university research.
FORMAL PROCEDURES FOR ALLOCATING COSTS AND NEGOTIATING RATES

Currently, three Office of Management and Budget circulars provide guidelines to federal agencies and research universities for financial management.

- **Circular A-21, Cost Principles for Educational Institutions**, establishes principles for determining the costs that apply to research conducted under grants, contracts, and other agreements with universities. This circular distinguishes between direct and indirect costs. Indirect costs fall into two categories: facilities and administration.

- **Circular A-110, Uniform Administrative Requirements for Grants and Other Agreements with Institutions of Higher Education, Hospitals, and Other Non-profit Organizations**, provides guidance to grantees and contractors for financial management of federal funds received.

- **Circular A-133, Audits of States, Local Governments, and Non-profit Organizations**, creates a vehicle to monitor compliance with cost principles and management regulations.

Although it is the Office of Management and Budget that sets forth cost policies, currently two other agencies are responsible for negotiating F&A cost-recovery rates with universities on behalf of the federal government: the Department of Health and Human Services (DHHS) Division of Cost Allocation and the Department of Defense Office of Naval Research (ONR). According to Circular A-21, the agency (DHHS or DoD) that provides more funds to an institution is responsible for negotiating the institution’s rate.

If an institution performs federal projects subject to Circular A-21 totaling less than $10 million (in direct costs) per year, it may use a simplified method (short form) rather than the regular method (long form) to account for its research costs. DHHS and ONR report that (as of June 1999) 685 colleges and universities use the short form. The short form offers two bases for computing F&A recovery rates. The rates may be computed on the basis of just salaries and wages (with or without including fringe benefits in the base) or on a base of modified total direct costs (defined in the discussion of the long-form method below). In addition, short-form rates are computed based on aggregate costs for the entire institution, whereas long-form rates at larger institutions may be computed separately for different functions, such as instruction and organized research. Because of these variations, it is not appropriate to compare rates computed on the short form with those computed on the long form. In this report, we will present information only for long-form schools.
When the cognizant agency and institution begin the F&A rate negotiation, the institution proposes percentages for components of the F&A rate based on data from the institution’s accounting system. The process may be formal, with face-to-face meetings, or an informal negotiation conducted through correspondence or teleconferences. The cognizant agency is responsible for formalizing all determinations or agreements with an institution. All of ONR’s negotiators are located at its headquarters. DHHS, on the other hand, locates negotiators in four regional offices.

DHHS and ONR report that, as of June 1999, 282 institutions use the long form. Rates for larger institutions using the long form are generally determined by major function: e.g., instruction, organized research, public service, and patient care. Thus F&A costs applicable to instruction are pooled separately from those applicable to organized research, resulting in different F&A rates for these two major functions. For long-form institutions, F&A costs must be apportioned on the basis of modified total direct costs (MTDC). MTDC includes most direct costs of projects: salaries, wages, fringe benefits, materials and supplies, and travel. MTDC also includes the first $25,000 of each subcontract. Subcontract amounts over $25,000 per subcontract are excluded from MTDC. Equipment, capital expenditures, and certain other expenses are also excluded from MTDC.

The cognizant agencies are permitted to negotiate several types of single-year or multiyear rates (defined in Appendix B). Agencies now prefer to use predetermined rates based on information from a base period. These predetermined rates are typically in effect for two to four years and are not subject to changes during the agreed period. Predetermined rates reduce costs of negotiating rate agreements and allow all parties to budget more precisely during the predetermined period. When a predetermined rate is not used, a negotiated fixed rate with a carry-forward provision may be used. Under this type of rate, any differences between the estimated costs used to establish the fixed rate and actual costs during the period are carried forward to a subsequent period as an adjustment.

Universities perform at least three major functions: instruction, organized research, and public service. Many universities operate medical schools, which perform other functions, such as patient care. It can be complex to allocate the costs of using and operating facilities that several of these functions may share. Similarly, administrative services are shared across multiple functions and must also be allocated. In a long-form negotiation, the university uses allocation methods prescribed in Circular A-21 to divide total facilities and administrative costs among the various functions and organizations within the university. It is up to the university to propose what the annual costs are for components of both facilities and administration. Universities may rely on special studies to
determine an allocation in the case of some cost elements. For instance, research laboratories often incur higher costs for utilities than instructional space does. Before 1999, universities that wished to claim these higher costs had the option to perform special engineering studies to allocate the utility costs to research space. Starting in 1999, these special studies were eliminated. Universities whose cognizant agencies had approved special studies instead were allowed to claim a flat amount of 1.3 percent of MTDC (1.3 points on their F&A reimbursement rate) in lieu of the special studies. This 1.3 percent of MTDC represented the average costs documented through the former special studies for utility use in research space.

In the interest of concluding their negotiation and reaching agreement, both the university and the cognizant agency may decide not to pursue claims they feel might be justified under Circular A-21. If a university chooses to exclude a certain cost element from its proposal, it waives the right to recover costs for that element. In addition to such compromises made during the negotiation process, universities may deliberately omit a cost element because they do not wish to incur the expense to document those costs or because they prefer to maintain an F&A rate that is competitive with peer institutions. Some observers believe that government negotiators seek, in some cases, to maintain comparability among institutions. An institution with a different cost structure may therefore be discouraged from including certain costs in its negotiated rate. For these reasons, the negotiated F&A rate may represent less than the full share of F&A costs attributable to federally sponsored research.

So universities might not recover the full costs attributable to federal projects because negotiated rates may be set below actual costs. Further, universities do not necessarily recover the full amount of the negotiated F&A rates. Statutory requirements and agency policies limit recovery of F&A costs on certain grants to fixed levels. For example, these limits are imposed on all Department of Agriculture research grants, specific NIH grants for predoctoral and postdoctoral training, and certain Department of Education grants. Even where no limits apply to F&A costs particularly, many agencies require or expect universities to share some of the costs of a research project.

CALCULATING THE F&A PORTION OF FEDERAL RESEARCH OUTLAYS

How is the share of federal research dollars devoted to facilities and administration calculated? We can approach the calculation in two ways. One method is to examine the projects conducted by universities with federal funds to compute the quantities in Figure 2.1 above. The other method is to examine federal
agency outlays to compute the fraction of awards that pay for F&A costs. Both methods are subject to incomplete data and hence can only produce estimates.

For the first method, we use data collected by the Council on Governmental Relations (COGR), an organization for research universities that deals primarily with federal administration of sponsored programs. COGR has conducted an annual survey related to F&A costs in its member institutions, which include most major research-intensive universities. We can use these data in the first method of computing the F&A portion of federal research outlays. In the most recent data, which cover the 1998 fiscal year, 128 higher education institutions reported data. Some of the institutions did not report complete data on the items we need for this analysis, so we were able to use 102 complete records.

For projects with federal sponsorship, these 102 institutions reported a total of $4.5 billion in MTDC and $1.2 billion in exclusions from MTDC (equipment, subcontracts, and other). They reported receiving $1.9 billion in F&A reimbursement from the federal government for these projects. The MTDC and F&A figures are totals from the survey reports, whereas the figure for exclusions from MTDC involves an estimate.¹

These figures indicate a breakdown of 75 percent for total direct costs (59 percent for MTDC and 16 percent for exclusions) and 25 percent for F&A costs. That breakdown is plotted in Figure 2.2 using the schema from Figure 2.1.

Using the negotiated rates for institutions in this survey, we compute that the (weighted) average negotiated F&A rate for these institutions is 51.2 percent of MTDC. This 51.2 percent does not mean that more than half of all payments go for F&A costs. The previous paragraph explains that 25 percent of total outlays are for F&A costs.

If these institutions received their full negotiated rates for each federally sponsored project, they would have received a total of $2.3 billion for F&A costs, rather than the $1.9 billion they actually did receive. Therefore, $0.4 billion of the negotiated costs for F&A at these institutions did not get reimbursed by the federal government.

We would like to compute these quantities for all higher education recipients. The total of the federal payments reported on the survey (using our estimate for

¹The survey requests separate figures for the federal share of MTDC and F&A costs but does not ask for exclusions from direct costs to be broken down between federal and other. We make the assumption here that exclusions from direct costs can be allocated in proportion to the MTDC for federal and nonfederal sponsors. There may be systematic reasons why federal projects include more or less of these exclusions than other projects. As a result, this breakdown could be off by a few percentage points.
Facilities and administrative (F&A) costs (25% of total costs)
Modified total direct costs (MTDC) (59% of total costs)
Equipment, subcontracts, and other exclusions (16% of total costs)
Direct costs (75% of total costs)


Figure 2.2—Average Distribution of Federal Awards

exclusions) is $7.6 billion, or a little more than half of all federal research payments to higher education that year. We are missing data on the experience of the universities and colleges that make up the other half of federal outlays. It is difficult to say whether the percentages that we are able to calculate from these data would apply to the institutions not represented here. In particular, the experience of other institutions in recovering F&A costs from the federal government may be different. The available data suggest that institutions with smaller federal research programs recover less of their negotiated F&A costs than institutions with larger federal programs. Because the COGR data include more of the large recipients and fewer of the small recipients, the institutions omitted from this survey may tend to recover less of their negotiated F&A rates, on average. There are other sources of uncertainty, however. Because of the estimation for exclusions, there may be a slight error in the breakdown in Figure 2.2. In any case, we do not know if the breakdown in Figure 2.2 is applicable to the omitted institutions.

In the entire system of universities and colleges, federal agencies awarded $15.1 billion for research and development at higher education institutions in fiscal year (FY) 1997. Projecting the breakdown in Figure 2.2 onto the omitted insti-

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tutions, we would calculate that of the $15.1 billion in federal outlays, $11.3 billion (75 percent) is for total direct costs and $3.8 billion is for F&A costs. Continuing this projection, universities and colleges as a whole were not reimbursed for $0.8 billion of negotiated F&A costs for federally sponsored research.

The second method of examining federal outlays is with agency data. NIH maintains statistics, discussed in Chapter Four, for research awards to universities that are not subject to any agency-specific limits on F&A reimbursements. For those awards, in 1998, 31 percent of the total funds were for F&A costs.

As noted above, some agencies have statutory caps that limit the amounts they pay for F&A costs. NIH accounting systems record that in FY99, the latest year available, universities received $592 million in MTDC for programs with statutory or regulatory limitations on F&A recovery. These programs include graduate and postdoctoral training grants and career awards, but not individual fellowships. Universities received $46 million in F&A costs on those grants, which limit F&A costs to 8 percent of MTDC. If the average rate of 51 percent of MTDC applied to these grants, F&A costs would have been $302 million. Therefore, about $256 million in otherwise allowable F&A costs were not reimbursed because of the limitations on NIH programs. Including the effect of these programs, we estimate that of all NIH awards to higher education, F&A costs represent about 29 percent of total awards.

The Department of Education observes the same limitations on its training grants. Because, in the field of education, most of those grants are considered part of dissemination rather than research training, they are not included in the research budget. Despite the difference in classification, universities must still make up the unreimbursed amounts from their resources, since, according to Circular A-21, these costs cannot be recovered from other projects. A few Department of Education programs subject to F&A limitations do fall within the research budget, but we did not calculate the unreimbursed amount.

The Department of Agriculture (USDA) has a number of limits on F&A reimbursements for its competitive research grants. Most programs limit F&A reimbursement to 14 or 19 percent of the total award costs. Most programs limit F&A reimbursement to 14 or 19 percent of the total award costs. As a result of these lim-

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3Governmentwide limits on F&A reimbursement still apply. As discussed in Chapter Five, a 26 percent cap applies to administration for all higher education institutions. In addition, we are aware that NIH must impose a salary cap of $136,700 and cannot reimburse salaries, especially of physicians, above that level. F&A costs for salaries above the cap are also not reimbursed.

4NIH data for FY 1998. In FY 1998, NIH made $9.304 billion in awards for research projects and centers, which are generally allowed full F&A reimbursement. NIH made $0.659 billion in training and faculty career awards, which are allowed 8 percent of MTDC for F&A. Considering exclusions from MTDC, F&A represents 6.6 percent of these total awards. The weighted average, using 31.0 percent for research projects and 6.6 percent for training and career awards, is 29.4 percent.
its, in 1998, 13 percent of USDA research project funds were expended for F&A reimbursements. USDA, according to its internal tracking, reimburses about half of the negotiated F&A costs on its research grants. Universities are contributing about $11 million per year from their funds.

The bulk of USDA’s awards classified as research and development is not for competitive research project grants. These awards are largely congressional formula funding for agricultural extension services, which involve extensive cost-sharing with the states. At least half of the costs of agricultural extension programs are generally borne by the states or other nonfederal sources. In the face of such extensive cost-sharing, there is no clear way to assign which funds are paying for the F&A costs of agriculture extension. The federal side considers all F&A costs paid from the state share. If we accept this view, then USDA’s overall research and development budget contains nearly zero reimbursement for F&A costs, because the only F&A costs attributed to the USDA budget are for the relatively small research project grants described above.

Other agencies also have required cost sharing. For NSF, recipients must share one percent on all grants. Some universities may treat this required cost sharing as coming from the F&A portion of the budget; others may account for it as direct costs; others may share it in proportion to the total budget in both categories. Voluntary cost sharing may likewise appear under F&A or direct costs.

Because NIH awards the majority (about 51 percent) of all federal research funding to higher education, its award structure heavily influences the average. Except for USDA, other major funding agencies are likely to resemble NIH in their experience, although the awards they make and the universities they support may differ. Because the USDA’s share for F&A costs is so low, the average for all agencies is probably close to, but smaller than, the NIH percentage. Based on the evidence we examined, a reasonable estimate of the true fraction of federal outlays for F&A costs is in the range of 24 to 28 percent.

The figure of 25 percent based on the data from universities accords very well with this range. As noted in that discussion, the 25 percent figure may not be quite accurate if applied to all institutions. It may be in error by a few percentage points because the institutions reporting in the COGR survey differ in some ways from those not participating in the survey. If we accept the 25 percent figure as applicable to the whole set of higher education institutions, we conclude that, of the $15.1 billion in federal outlays, 25 percent, or about $3.8 billion of

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5Data provided by USDA for FY 1998. That year, the USDA made awards of $84,176,009 for competitive research grants. Of this amount, $10,910,782 was for F&A costs. The ratio of F&A costs to total awards was 13.0 percent.
this amount, was for F&A reimbursements. The direct costs of projects were 75 percent of total outlays, or about $11.3 billion.

As noted above, actual reimbursements for F&A costs on some projects are subject to limits. The full negotiated amounts for F&A are not reimbursed for those projects. We now perform a series of calculations to estimate unreimbursed F&A costs. These calculations are necessary because we are estimating the F&A costs associated with the current set of research projects pursued in higher education with federal funding. Since we do not know the exact split of direct and F&A costs in the current outlays, we first estimate that split using available information. The direct costs identified in this way represent the current set of projects. Using estimates of the split of direct and F&A costs that occurs when no special limits are imposed, we can identify the approximate F&A costs that match the calculated direct costs. By comparing this calculated amount to the amount of F&A costs in current outlays, we compute unreimbursed F&A costs.

The NIH data provide one estimate of project budgets when most special limits do not apply. For NIH research project awards, 31 percent of total outlays reimburse F&A costs. If full F&A reimbursement had applied to every grant and contract with universities and colleges from every agency and program been accorded, direct costs would be 69 percent of total costs and F&A costs would be 31 percent. The actual figure might be a few percentage points different, to the extent other agencies work with different universities than NIH and experience different cost structures.

Using a split of 75 percent direct costs and 25 percent F&A costs, we estimated above that direct costs were $11.3 billion. Under these assumptions, with direct costs of $11.3 billion, negotiated F&A costs would have to total $5.1 billion in order to make total expenditures $16.4 billion, split in the proportion 31 percent for negotiated F&A expenditures and 69 percent for direct expenditures. We estimated above that the federal outlays for F&A costs were $3.8 billion, meaning that about $1.3 billion was not provided by federal funds. Under these assumptions, the federal government appears to reimburse about 75 percent of F&A costs attributable to federal projects, based on negotiated F&A rates.

We do not simply split the actual outlays of $15.1 billion in the proportion 31 to 69 percent. That procedure would represent a change in the projects pursued at universities, since we would be eliminating direct costs that are currently expended on federally funded research projects. Our calculations here hold the current set of projects fixed in order to calculate how costs are shared between federal agencies and universities.

Because these figures are based on assumptions as well as actual data, they are not precise. We can get a measure of the uncertainty by varying the param-
eters. If we use a low-end figure of 24 percent of federal outlays to represent F&A costs, we would find that reimbursed F&A costs were $3.6 billion and unreimbursed costs were $1.5 billion. In this case, the federal government appears to reimburse about 70 percent of the F&A costs. If we use a high-end figure of 28 percent of federal outlays to represent F&A costs, we would find that reimbursed F&A costs were $4.2 billion and unreimbursed costs were $0.7 billion. In this case, the federal government appears to reimburse about 87 percent of the F&A costs. Given the uncertainty involved in these figures, it is appropriate to round this 87 percent figure to an even 90 percent, making the range we estimated 70 to 90 percent of negotiated F&A costs reimbursed. All of these figures are based on the assumption that the 31 percent of project costs for NIH represents the full federal share when negotiated rates are used without limitations.6

Extrapolating from the COGR university data above, we estimated that universities as a whole are not reimbursed for about $0.8 billion in F&A costs. This figure is at the lower end of the range we estimated based on the government data.

To summarize, using the data we have available and making assumptions where data are inadequate, we estimated that federal outlays for research in higher education include about 25 percent (24 to 28 percent) for F&A costs. Federal F&A reimbursement does not cover the full negotiated federal share of university F&A costs. Using university-reported data, we estimated that roughly $0.8 billion of F&A costs for federal projects was not reimbursed. Using the data from federal agencies, we estimated that this amount was between $0.7 and $1.5 billion. Because the data do not cover some important segments of agency funding or institutions, we cannot be more precise than the ranges we present here.

We can identify some reasons for F&A costs not being reimbursed. The NIH training and career awards discussed above require universities to fund about $250 million per year in F&A costs that these grants do not reimburse. Awards from the Department of Education and USDA also require university funding for some F&A costs. The remainder of the unreimbursed F&A amounts are primarily general cost sharing, but mandatory and voluntary, which universities may consider either direct or F&A costs.

To compensate for underreimbursement of negotiated rates, universities might pursue several strategies. Although we might be concerned that universities would shift costs from projects with less generous agencies to projects with

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6In another analysis using earlier data from the COGR survey, analyzed in Chapter Four, we estimate that institutions recover about 77 percent of their negotiated F&A rates. This is consistent with the range we estimate here.
more generous agencies, OMB Circular A-21 indicates that its controls prevent this form of cost shifting. Circular A-21 requires that facilities and administrative costs be apportioned to all organized research projects regardless of whether full—or any—reimbursement is available from federal sources. The methods of apportionment in Circular A-21, such as allocating by square footage used in each activity, are not amenable to shifting from the true use to another reported use. So it can be assumed that universities do not have latitude to assign costs to more generous agencies in preference to less generous agencies.

Beyond these statements, we do not have data to indicate how universities compensate for underreimbursement. Many possibilities exist for how universities fund costs that are not reimbursed. They may use private gifts or endowment income, state appropriations, or other sources of revenue. We cannot be precise about the mechanisms used because of the overlap of university missions and funding sources.

COST-SHARING

The calculations above indicate that universities share facilities and administrative costs in the range of several hundred million dollars per year or more. In addition to agency-specific limits on facilities and administrative reimbursement, there are other cost-sharing requirements. The NSF, for example, has a statutory requirement that universities provide some cost-sharing on all projects, at a minimum of one percent of the total project cost (including direct and F&A costs). Individual programs within agencies may seek additional cost-sharing, or universities may voluntarily propose higher cost-sharing.

In 1991, OMB Circular A-21 was revised, in response to congressional interest, to place a cap on the level of administrative costs that could be included in rate negotiations. From this point, universities could include only 26 percent of MTDC for administration. Any administrative costs over this amount would not be included in the rate negotiations and hence not reimbursed. If universities continued to experience costs in excess of this amount, they would have to pay for them from other funds.

As mentioned in Chapter One, universities pursue several functions simultaneously and with shared resources. Universities must account for faculty effort and the use of shared facilities in order to allocate these shared costs to the appropriate functions. One function is instruction—the teaching of students. Another function is organized research, which includes sponsored projects as well as any separately budgeted research activity, even if paid for with the university’s own funds.
Not all research activity is part of an organized research project, though. Small projects and general scholarly work without external funding are considered part of basic faculty workload. This work, termed “departmental research,” is considered part of the instructional function. Effort on both instruction and departmental research is combined for purposes of allocating shared costs.

If faculty time is contributed to a general line of research but not shared on the budget of a funded project, then it may be considered departmental research. The university pays for the direct costs of departmental research as well as any associated facilities and administrative costs, just as it does for instruction (which is combined with departmental research for accounting).

If faculty time is formally shared on a project budget, that time must be accounted for as part of organized research, even though it is not sponsored by the government. The university must bear the costs not paid by the government—both direct costs and associated facilities and administrative costs. A university’s cost share on a federal project is supposed to be counted as part of the MTDC base in calculating F&A rates, even though it is not reimbursed. Universities that contribute more in cost-sharing for research will see lower F&A rates because they have a larger base. When F&A costs are spread over a larger base, the F&A rate is reduced, resulting in lower F&A rates for universities with more cost-sharing.

The question may be raised about whether universities can shift costs onto organized research rather than departmental research, which is a component of instruction. Because F&A costs are allocated to both instruction (including departmental research) and organized research, universities do not appear to have the ability to shift them from departmental research to federal projects. Federal projects benefit from faculty effort provided under departmental research in a similar way to faculty effort provided as a cost share under organized research.

As mentioned in the introduction, universities and their faculty are voluntary participants in this system. They offer and provide these cost shares because they perceive good reasons for them. Specifically, federal projects bring prestige to faculty in their careers and universities as institutions. As Figure 1.1 shows, universities provide much of research funding from their own sources. Some of these funds support entire projects that do not have outside sponsorship. Other funds support part of projects funded with federal grants or contracts. The funds support direct costs and F&A costs.

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7Several researchers have examined the link between sponsored research and prestige, including Fairweather (1988), McGuire et al. (1988), and Grunig (1997).
EXAMINING F&A RATES

With this background, we now turn to the six questions raised by Congress. As stated in the introduction, this report analyzes available data related to each of the questions. We first compare facilities and administrative rates in higher education with those in other sectors. Then we examine F&A rates within higher education, the impact of changes in Circular A-21, and the impact of federal and state law. We next examine options to reduce F&A reimbursement rates and options for creating a database. A conclusion brings together some of the insights from the analyses.