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FACILITIES & ADMINISTRATIVE (F&A) COSTS

Most faculty members in research-oriented departments are familiar with the application of the organized research F&A rate (previously called indirect cost rate) to research projects. However, there are often questions regarding exactly what the rate includes, how it is developed, and how the funds flow into the University. In an attempt to shed some light in this area, the following paper answers some frequently asked questions and addresses some common misunderstandings. The key points to be addressed are:

- the definition of F&A (indirect) costs as contrasted with direct costs
- the identification of F&A costs as real costs which have already been incurred
- the calculation of the pool, base, and rate
- the application of an average rate
- the effectiveness of recovery

What are Facilities & Administrative (F&A) Costs?

In the general sense, F&A costs are costs of activities that support or provide service to the various direct functions of the University. They are treated as F&A, or indirect, costs because of their shared nature and because of the difficulty of directly assigning them to a particular department, function, or project. Facilities expenses are the largest group of these. This category includes building and equipment depreciation (a method of spreading major capital expenses, such as building construction, over time) and annual operation and maintenance costs of the physical plant. In addition, the costs for administrative and service functions, such as payroll, accounting, purchasing, and sponsored programs or projects administration are also F&A costs, as are academic support, such as departmental and deans' offices and the libraries. F&A costs serve the direct functions of the University, which are instruction, research, clinical trials, patient care, and other activities, such as community service, conferences, and other collegial activities.

The Organized Research F&A Cost Rate

Although there are many F&A cost categories in support of the direct functions of the University, this paper will concern itself with the organized research F&A cost rate and its components. The purpose of the organized research F&A cost rate is to permit the University to recover expenses incurred on behalf of organized research projects, and all costs included in the rate are real costs that have already been incurred. Typically, the rate is based upon costs incurred several years in the past and projected forward with adjustments for expected changes. Rates negotiated with this process are called predetermined rates. Since the rate is based on actual expenditures, the University can never "make a profit" from F&A costs. Similarly, the revenue resulting from the application of the F&A cost rate should not be viewed as "new" funds available for additional expenditures but, rather, as a repayment for already-incurred expenses. The funds received by the University are used to support the University's annual operating budget, and funds are assigned to the divisions that incurred the costs. F&A cost recovery is a significant portion of the annual academic budgets of the College and the School of Medicine and Dentistry. In fiscal year 1996-97, F&A cost recovery supported approximately 18% of core budget expenditures for the College and 43% of core budget expenditures for the School of Medicine and Dentistry.

Definition of Organized Research

OMB Circular A-21 now defines organized research to mean all research and development activities of an institution that are separately budgeted and accounted for. This will include **sponsored research**, which is that research activity sponsored by Federal and non-federal agencies and organizations, and **University research**, which is research activity that is separately budgeted and accounted for by the institution under an internal application of institutional funds.

The Rate Calculation

The definition, calculation, and application of the F&A cost rate are governed by federal regulations. Several categories of cost are defined, limited, or, in some cases, entirely excluded by the regulations. Most of the methods are specified, but where flexibility exists in the regulations, the University may propose modifications or exceptions. When completed, the overall rate calculation, called the F&A cost study, is reviewed for compliance with Federal regulation. Studies which serve as "base" years for rate-setting undergo complete governmental audit and negotiation. This process always results in reductions in identified costs.

Allocations and the F&A Cost Pools

In the University's cost accounting process, each category of expense is allocated according to a specific allocation base among the functions benefiting from the service. Allocation bases are developed from current year data converted to percentages that are used to spread the F&A costs among several functions, such as instruction, research, and other academic activities. There may be multiple allocations or steps within each category. In most cases, formulas and methods are specified by federal regulations. Bases are chosen to reflect, within reason, the services provided or benefits derived. For example, library expenses are allocated according to a combination of population figures and the salaries and wages most closely associated with the functions served by the library. Facilities expenses are allocated according to space usage, and sponsored projects administration (ORPA and Sponsored Programs Accounting expenses) on the basis of modified total direct costs of all sponsored projects. Of the library expenses, only a small portion is included in the organized research rate, while a very large portion of sponsored project administration expenses is included in this rate. The sum of all the costs in each category allocated to organized research is called the organized research F&A cost pool.

The MTDC Base

The organized research modified total direct cost (MTDC) base has been specified by the federal regulations as a method of reasonably assigning the F&A cost pool to individual projects on an average basis. The MTDC base includes all direct organized research costs on all organized research projects (whether they carry the full F&A cost rate or not) with certain costs excluded, such as equipment, renovations, a portion of subcontracts, fully-costed shops, patient care, and tuition. These costs are excluded from the MTDC base to prevent an inappropriately large assignment of costs to a particular project. For example, equipment purchases are excluded from the base because the administrative costs actually involved in a \$100,000 purchase would be far less than the F&A cost charges that would be assessed to the project.

Application of the Rate(s)

Since the F&A cost rate is an average, the dollars charged to a particular project are not necessarily equal to the amount of F&A costs actually incurred by that project. For example, two NSF grants in Mathematics and Chemistry, each incurring \$50,000 of direct costs, would be assessed the same amount of F&A costs. However, if one could measure the F&A costs actually incurred for the two projects, one would find the project in Mathematics incurred lower F&A costs than the average represented by the rate, and the Chemistry project incurred far greater costs. This is caused primarily by the vastly different facilities expenses involved in supporting the two projects. Thus, it is problematic to base budgetary decisions for either individual projects or individual departments on the basis of F&A cost revenue.

At the University, as at other institutions, two F&A research cost rates are actually used: one for on-campus and one for off-campus research projects. The facilities cost components of the pool are factored into the on-campus rate only, and the non-facilities cost components of the pool are factored into both rates.

Since the F&A cost rate is calculated by dividing the total F&A cost pool by the organized research MTDC base, and the definition of costs included in each may vary, the resulting rate is not necessarily a meaningful number to be compared among institutions. Despite increasingly strict regulations, there are still some choices which institutions may make regarding allocation bases and the definition of costs to be included in the research MTDC base. For example, institution A may exclude more costs from its MTDC base than institution B. This would cause institution A to have a higher F&A cost rate even if all the F&A costs were the same.

The University of Rochester's F&A Cost Rate

Following is a simplified outline of the actual calculations for the fiscal year 1996-97 (July 1, 1996 – June 30, 1997) for the University of Rochester. (This year served as the “base” year for the most recent negotiations for FY99, FY00, FY01, and FY02.) The first expense column shows the F&A costs incurred for the River Campus, the Laboratory for Laser Energetics, the School of Medicine and Dentistry, and the School of Nursing (the divisions which have organized research). The second expense column shows the amounts that were included in the F&A cost pool and, the third, the percentage included in the pool. From this table, we can see that on the average 31.7% of the University's F&A expenses in those divisions with research become part of the F&A cost pool. (Because the expenses in the first column have already been reduced by those expenses deemed "unallowable" or "not allocable" by the regulations, such as public relations and development costs, etc., it would not be strictly correct to state that 32% of all F&A expenses in these divisions are applicable to organized research.)

All dollars in \$000's

F&A cost category FY97	Total Expense Pool	Amount in Research Pool	Percent in Rate	MTDC Bases (On-Campus & Total)	Resulting Rate
	A	B	B/A	C	B/C
Building Depreciation	\$23,730	\$3,409	14.4%	\$62,487	5.5%
Equipment Depreciation	\$7,901	\$2,280	28.9%	\$62,487	3.6%
Operations & Maintenance	\$30,832	\$12,887	41.8%	\$62,487	20.6%
General Administration	\$13,288	\$5,007	37.7%	\$67,805	7.4%
Departmental Administration	\$36,981	\$13,291	35.9%	\$67,805	19.6%
Sponsored Projects Administration	\$2,616	\$1,931	73.8%	\$67,805	2.8%
Library	<u>\$13,930</u>	<u>\$2,224</u>	<u>16.0%</u>	\$67,805	<u>3.3%</u>
Totals	\$129,278	\$41,029	31.7%		62.8%
Administrative Cap					<u>-3.8%</u>
Net Rate					<u>59.0%</u>

Let us follow the Sponsored Projects Administration line for a specific example. The \$2,616,000

represents the total costs associated with the Office of Research and Project Administration, Sponsored Programs Accounting, Indirect Cost Accounting, RSRB, Clinical Research Institute, and the building depreciation, equipment depreciation, and operation and maintenance assignable to them. Of that total, \$1,931,000, or 73.8%, is allocable to the organized research activity. The allocation is based on the MTDC (modified total direct costs) of all organized research projects. The remaining 26.2% is allocable to non-research sponsored projects (training grants, clinical trials, demonstration projects, etc.). The \$1,931,000 divided by the total on- and off-campus organized research MTDC base results in 2.85 points of the calculated rate before the administrative cap. The calculated FY97 expenses and MTDC were then adjusted for known and expected changes and projected forward to serve as the base for negotiating rates for FY99, FY00, FY01, and FY02.

"Effectiveness" of Recovery

The University does not recover the total F&A costs incurred in support of organized research for various reasons. First, the regulations impose a number of arbitrary limits and caps on the costs included in the rate, which preclude the full recovery of costs in certain categories. For example, all administrative costs in the rate may not exceed 26 points of the total rate. As the following table shows, the actual calculation of administrative F&A costs incurred in fiscal year 1996-97 would support 29.8 points in the rate. Therefore, 3.8 points, or approximately \$2.6 million in reimbursement, were lost to the University because of the administrative cap.

Administrative Cap Effect

Administrative Points in Rate	29.8%
Allowable Points	26.0%
Reduction	-3.8%
Net	<u>59.0%</u>

Dollar Value of Cap (in \$000's) \$ (2.576)

Likewise, refinements in the cost calculation which seek to more accurately reflect the costs allocable to research are subject to audit and negotiation and are extremely difficult to implement. For example, in the past, facility costs were allocated among the functions on an average cost basis for all types of space (laboratories, offices, classrooms, etc.). Many years of engineering studies, nation-wide, were required to convince the government that research laboratory space is more costly to operate than office space primarily because of the higher consumption of utilities. An institution that previously employed a utility special cost study in the negotiated F&A rate proposal may now add a utility cost adjustment (UCA) of 1.3 percentage points to its negotiated overall F&A rate for organized research. The University's recent cost proposal included this UCA of 1.3 percentage points with the cost data.

Waivers and Exceptions

Another more significant factor in the University's failure to fully recover its F&A costs is that not all organized research projects are charged the full F&A rate. Some sponsors arbitrarily limit the rate that can be charged and, in other cases, investigators have negotiated exceptions to the application of the full rate with their school or college. When this occurs, all the costs waived by the University for projects, whether funded by foundation, corporate, New York State, or federal sources, are fully borne by the University. The difference between the dollar amount resulting from the application of the full rate and the dollars actually charged is not added to future rates to be borne by other projects. These unreimbursed costs represent a subsidy by the academic budget.

For example, if an investigator receives a research grant from a foundation with a 15% F&A cost rate, that project will be classified as "organized research" in the F&A cost study, and will contribute costs to

the indirect cost pool and expenses to the MTDC base in the same way that a full-rate paying project would, but recovery is only 15%. The difference on a project with a \$40,000 MTDC would be \$17,600 of unrecovered expenses borne by the University budget (when full overhead is 59%).

Currently at the University of Rochester, because of limits, waivers, and exceptions, the "effective" rate of recovery is only about 88% of the total which would be produced if all projects carried the full negotiated rate.

The following table compares the F&A cost recovery that would have been received by the University if all research projects had been assessed the full F&A cost rate with the amount actually recovered. The example is from fiscal year 1996-97.

Effective Recovery (all dollars in \$000's)

MTDC Base	\$ 67,805
Calculated Recovery (on and off campus)	\$ 38,409
Actual Recorded F&A Recovery	<u>\$ 34,014</u>
Difference	<u>\$ (4,395)</u>

Other Contributions to Research

In addition to the F&A costs not fully recovered, the University also supports a number of direct costs of research which are not charged to projects. For example, faculty academic year effort which may be devoted to a project, but not identified with it, is paid for by the University. Like F&A cost waivers, foregone direct costs represent expenses borne by the academic budget, which must be subsidized by other revenue sources. Additionally, current DHHS audit policy requires this cost sharing to be included in the organized research base, thereby reducing the research rate and reducing cost reimbursement to the University.

Case Study: An Investigator's Proposal

A research project investigator comes to her department chair with a proposal to renovate her laboratory space because she has received an additional research grant. She makes two points. First, the renovation costs will be included in the F&A cost rate and be recovered, so it "won't cost the University anything". Second, since her new project will be bringing in more F&A cost recovery, the "University will actually get more money".

In regard to the first statement that all the costs will be recovered, the following must be considered: in this example, the costs of the renovation will be included in the F&A cost study only to the extent that space in the building affected is classified as organized research space. The renovation costs will be added to the total building value and the resulting increase in depreciation will be spread over all the functions of the building. For example, if the building is classified as 50% organized research, only 50% of the depreciation will be included in the pool each year. Second, because of the waivers and exceptions noted above, only 80% of what is included in the rate will be recovered. Third, because the renovation costs are capitalized and depreciated, their recovery will be spread out over perhaps 15 years. In the meantime, the University has financed the renovation costs.

In regard to the second statement that the University "will get more money", the error lies in assuming that F&A costs charged to a particular project are applicable to that project. Because the rate is an average, F&A costs recovered in a particular academic area or department must really be considered part of a larger group. Any measurable growth in the MTDC base which exceeds a proportionate growth in F&A cost pools would result in the negotiation of a lower rate in the future.

In summary, the University can never receive more in F&A cost recovery than it has actually spent.

Furthermore, because we don't fully recover our F&A costs, for reasons explained above, incremental expenditures can never be completely reimbursed through the F&A cost rate. Therefore, when an investigator comes to the department chair or dean for funds for a renovation or any other purpose, the decision should be based primarily on programmatic reasons, not on the assumption of gains from F&A costs.

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