Report of the Research Commission
Fiscal Task Group

Ohio State's current fiscal environment cannot sustain a legitimate drive to be counted among the Top 10 public research universities. Strategies falter when implementation funds cannot be identified in the current budget. Real progress requires substantial new funding, not new taxes.

We need a fiscal environment where growth can be seeded with a fraction of the capital that is needed to sustain the resultant activity and where this activity largely sustains itself using revenues it produces. Our current environment does not encourage planning for this type of growth. Activities that generate significant new revenues are not guaranteed new support. Activities that are given significant support on the basis of promised revenue growth do not lose that support if the revenue fails to appear. Instead of seeding, we are subsidizing.

Budget Restructuring (BR) offers an opportunity to drastically improve this situation. We accepted the principles stated in BR-VIII and worked on four issues[1] that must be resolved to enable sponsored research to thrive under BR:

Return of Administrative Component of F&A
Return of Facilities Component of F&A
Graduate Fee Authorizations on Sponsored Projects
Office of Research under Budget Restructuring

We do not adequately address non-sponsored research under Budget Restructuring. This is a *serious shortcoming* of our report.

We assume a basic understanding of F&A[2], usually referred to as indirect costs. Our federally negotiated rate is 46%, composed of 26% (capped) for administrative costs at all levels and 20% (not capped) for facilities (which includes space and equipment). This is not an accurate estimate of the actual average cost of sponsored research, nor should it ever be used as such in a planning exercise. Indeed, we should not expect sponsors to fully cover the costs of any research *that is critical to our educational mission*; however, we should strive to recover as much of these costs as possible, and we should fully recover the cost of research that is not truly linked to education.

We have reviewed our current F&A recovery from a multitude of sources and attempted to make recommendations that are consistent with sustainable growth in this evolving environment. Not all sponsored research should recover 46%. There are several common rates, including an off-campus rate (26%), a public service rate (31%), a clinical trials

[1] A fifth issue, new sources of seed capital, is addressed in a separate document.
[2] See Appendix A for a brief overview.

rate (25%), two rates the state commonly allows (5% and 8%); and we do not charge overhead on funds that simply pass through OSURF. The Research Commission reported that we significantly under-recover F&A. In some cases, and particularly for some research supported by the state, this is clearly true. However, when we acknowledge that several of our rates are "legitimate" (*e.g.*, the off-campus rate simply removes the 20% for space and equipment in the 46% rate) the situation is less clear.

Under decentralized budgeting, deciding what F&A rate is acceptable for a particular project and deciding what fraction of costs should be born by state subsidy and fees moves much closer to the project. The impact of these decisions remains close to where they are made, and the multitude of potential benefits to the institution from a project can be appreciated and carefully weighed.

Return of Administrative Component of F&A

We recommend that 17% of the 26% in administrative cost recovery be returned to the Colleges, Centers, or VP Areas[3] that generate them; and that all administrative costs at or below the cost center level be directly assigned to that cost center. We further recommend that 9% be retained to support OSURF and the Office of Research.

This recommendation is consistent with the way subsidies and fees are assigned in BR-VIII. It assumes that the cost center should receive about 75% of the administrative costs recovered, which would be 19.5%. We reduce this to 17% because we believe 9% is a more reasonable level of support for OSURF and the Office of Research. OSURF cost about $6.8M[4] in FY 1998, and we obtained about $110M in MTDC[5], which leads to a rate of 6.2% for OSURF alone.

BR-VIII proposes that the entire 26% be returned to the cost centers; however, it places no restriction on how costs above the level of the cost center will be charged. OSU claimed OSURF and central administrative costs of 12.62% in our last rate negotiation, but we were allowed to recover only 10.73%. We claimed costs of 17.98% at the college and department levels, but were allowed to recover only 15.28%. Since that time the cost of OSURF as a fraction of direct costs has decreased, and we believe that all costs above the cost center level should decrease as a fraction of direct costs because of efficiencies of scale. However, as we move to the level of the project, costs probably scale linearly at best. This means the cost centers need to recover a rate as close as possible to their current costs in order to sustain growth and improvement.

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[3] From this point forward we usually refer to this collection as cost centers.
[4] This figure includes $600K OSURF pays for space, and alternatives should be studied that reduce this cost.
[5] Modified Total Direct Cost. This is the direct cost of research after removing equipment charges and other costs that have no overhead associated with them.

Return of Facilities Component of F&A

The Research Commission identified the availability of facilities (which includes space) as a hurdle to Ohio State improving its track record in generating externally supported research; however, it made no specific recommendation for how to use facilities cost recoveries to solve this problem.

We recommend that the facilities component of F&A be returned to the generating cost center, after the component of F&A dedicated to library support[6] is removed and placed in the library budget. In order to insure that returns are used to support facilities that qualify as legitimate indirect costs in future negotiations, we recommend that the Office of Research oversee their use, as detailed below.

This recommendation is consistent with BR-VIII, which suggests that all facilities cost recoveries be returned to the cost center that generates them, and that all costs associated with space be charged to those centers. We separate the contribution to the library because we believe that it is important and should remain visible. BR-VIII does not single out sponsored research space, so that cost centers will be charged for the cost of their facilities regardless of the use to which they are put. We strongly endorse this position.

We recommend OR oversight to insure that returns are used to support facilities that qualify under OMB A-21[7] as legitimate indirect costs that support sponsored research. Each cost center will have an account administered by the OR containing its facilities return, after subtracting the contribution for the library. Under BR-VIII cost centers will be charged for all facilities. The portion of these costs that can be covered by the facilities funds administered through the OR must be based on audited costs[8] of facilities that are used to substantiate our indirect cost negotiations with the federal government.

Any remaining balance in these accounts may be spent to grow facilities support for sponsored projects in the cost center. *We hope the needs of PIs will guide these expenditures*. The OR must approve expenditures from these accounts, insuring all such expenditures will be eligible for inclusion in calculating subsequent facility cost components of F&A. These support accounts will thus be restricted, and may not be used to support operating costs of any kind or support facilities for other than sponsored project research. Any unused funds will be earmarked for the OR to use for facility support of sponsored projects in the university at large. The OR may, at its discretion, institute "swap" agreements of unrestricted funds for restricted funds, including agreements that are not one-for-one.

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[6] 1.44% in our current rate.
[7] This document provides the legal guidelines for our federal indirect cost negotiations.
[8] This is not a new audit. We currently rely on reports from Chairs and Deans for much of the data that supports our rate negotiations, and we believe our recommendation will provide a much-needed incentive for these administrators to provide accurate data.

Appendix B shows some estimates of the implications of F&A returns broken down for a large number of large cost centers.

Graduate Fee Authorizations

Ohio State provides fee authorizations for all graduate RAs paid by grants that bring in the full 46% F&A rate. These authorizations are assessed at in-state rates as a cost to the Office of Research. This assessment has grown from $4.9M in FY 1995 to about $6.0M in FY 1999. This growth, along with assessments for new facilities, is basically bankrupting the OR. The Office of Finance believes the OR is currently $5.3M in the red. This may represent a problem as we try to attract a new VP for Research.

It is interesting to examine the growth in student subsidy during this same period.

Table 1. State Subsidy in Thousands of Dollars[9]

	FY 1995	FY 1999
Lower division UG	26,386	29,721
Upper division UG	90,775	106,670
Masters	48,250	50,415
Doctoral	54,698	66,072
Medical	43,819	52,282

The majority of doctoral students are at Ohio State because of our research programs. It seems likely that many of our medical students are also here because of our research programs. During the period when RA fee authorizations grew by $1.1M, the subsidy for doctoral students grew by over $11M and the subsidy for medical students grew by $8.5M. The majority of credit hours that were authorized were for 999; that is, for thesis research. The cost of conducting these extra "courses" was largely covered by F&A.

It also seems likely that our ability to attract many upper division undergraduates and Masters students rests partially on the strength of our research programs.

In our opinion, these observations illustrate the extreme danger of any artificial separation of research revenues and expenses from all other revenues and expenses. We are encouraged by the possibility that Budget Restructuring may provide administrators with the opportunity to make investment decisions on the basis of their total impact on the university.

Nonetheless, we are faced with the very serious question of whether the university should continue to provide these fee authorizations. The current budget system has forced the

[9] Source: RPIA.

OR to try to convince faculty that directly charging these fees, as is done at many of our peer institutions, is desirable. The OR has repeatedly failed to convince faculty, who in general see this as a wise investment strategy, and it has failed to convince us.

Who should forego the income from tuition and fees for grant-supported RAs? The answer to this question depends on our objectives and whether our current strategy works. Clearly we want to attract as many high-quality graduate students as possible, and the availability of support from projects that are capable of winning external support is essential.

The short-term effect of forcing PIs to pay fees using direct costs will be a reduction in the number of RAs supported by grants. We cannot accurately estimate the magnitude of this effect or how long it will last. Such a change in policy clearly increases the cost of hiring graduate students, and it is inevitable that in some cases this will tip the balance in favor of other researchers such as postdocs.

We recommend that under Budget Restructuring each cost center must decide whether it will forego the 75% of tuition revenue to which it is entitled from RAs supported by grants that recover the full 46% F&A. If it does, the central administration will also forego the 25% of this revenue to which it is entitled.

We believe that this recommendation is consistent with our current investment in graduate students supported by grants and with Budget Restructuring. The issue of whether these authorizations show up as foregone income or as a cost should be trivial for any spreadsheet. Take your pick.

In order to estimate the amount of income that would be foregone by colleges, we display the authorizations for FY 1999.

Table 2. FY 1999 Tuition Authorizations by Area

	Tuition Authorizations
Bio Sci	526,451
Ed	221,686
Engr	2,146,000
Human	81,388
MAPS	761,000
Med	473,763
Ofc Rsch	295,000
SBS	329,693
Total	**4,834,981**

<u>Office of Research under Budget Restructuring</u>

We advocate decentralization of as many research investment decisions as reasonable, recommending that the Office of Research continue to play the principal role within the central administration of fostering both sponsored and non-sponsored research.

The Office of Research is not the Office of Sponsored Research. We emphasize that while revenue streams supporting sponsored and non-sponsored research differ, central oversight of and investment in both by a single office are essential to avoid debilitating conflicts and to encourage appropriate collaborations.

Non-sponsored research relies heavily on income from state subsidies and student fees, which is appropriate because our ability to create new knowledge enables us to provide an exceptional education, especially at the advanced undergraduate and graduate levels. At the same time, sponsored research must partially rely on those same subsidies and student fees, for the same reasons that non-sponsored research relies on them.

We believe that a fraction of the 25% of subsidy and fees that goes to the central administration should be administered by the OR. Our research activity is directly responsible for attracting a large fraction of our graduate and medical students, and at least indirectly responsible for attracting and retaining advanced undergraduates. The state subsidy coming to Ohio State from students attracted by our research has grown substantially in the last five years, as shown above; and the revenues available to seed new research enterprises should grow accordingly under any rational budget.

Although we do not make any detailed recommendations concerning these revenues, it is absolutely essential to acknowledge the fact that research is directly responsible for much of this revenue as Budget Restructuring moves forward and provides guidelines for how the fraction of subsidy retained by the center is administered. The cap recently placed on some graduate subsidy does not alter this observation.

In Appendix C we discuss some of the implications BR may have on current expenditures in the OR.

Acknowledgements

Many individuals helped us, but we would like to particularly thank Tom Ewing and Phil Schwirtzinger from Accounting for helping us understand indirect costs, and Alice Stewart and Marie Mead from RPIA for helping us understand the state subsidy. We are also indebted to the staff in the Office of Research for simply helping us whenever we asked for help.

Appendix A: <u>Brief overview of F&A</u>

F&A (facilities and administration indirect costs) are usually referred to simply as indirect costs. There are many types of research on campus, and the actual costs vary widely; however, the F&A rate we negotiate with the federal government is based on an averaging exercise whose guidelines are given in Circular A-21 from the OMB. We have negotiated a 46% rate for all on-campus federally sponsored research.

Table 3. OSU Federal Organized Research Rate by Function

	COMPONENT BASE RATES	COMPONENT RATE
ADMINISTRATION & GENERAL	3.61%	3.07%
COLLEGE ADMINISTRATION	5.14%	4.37%
DEPARTMENTAL ADMINISTRATION	12.84%	10.91%
SPONSORED PROGRAMS ADMINISTRATION	9.01%	7.66%
TOTAL ADMINISTRATIVE RATE	30.60%	26.00%
BUILDING USE ALLOWANCE	1.41%	1.38%
IMPROVEMENT USE ALLOWANCE	0.09%	0.09%
EQUIPMENT USE ALLOWANCE	5.02%	4.91%
OPERATION & MAINTENANCE	12.45%	12.18%
LIBRARIES	1.47%	1.44%
TOTAL FACILITIES RATE	20.44%	20.00%
TOTAL RATE	51.04%	46.00%

Table 3 shows the breakdown of our federal on-campus rate by category of expenditure. Administrative rates at various levels of the university are given first, followed by components of the facilities rate. The column labeled Component Base Rates lists the rates we documented in our last negotiations, and the last column shows the rates the federal government allowed us to recover. Note that the total administrative rate is capped for all universities at 26%, although we showed an expenditure rate of 30.6%. The total facilities rate is not capped and we should be able to recover almost everything that can stand up to an audit.

The allowed costs that feed these various cost pools are not widely understood on campus, and most PIs do not appreciate what costs are covered by the F&A they bring in. This leads to attitudes that Budget Restructuring will hopefully improve.

We want to emphasize that the facilities costs include the cost of building, improving, and maintaining research space as well as the cost of acquiring equipment that is not direct-charged to grants. There is also a 1.44% charge for libraries. This 20% component of the rate is not charged to off-campus research, because that research is not supposed to be housed on campus or use equipment purchased by the university.

Table 4. OSU Federal Public Service Rate by Function

	COMPONENT BASE RATES	COMPONENT RATE
ADMINISTRATION & GENERAL	3.64%	3.29%
COLLEGE ADMINISTRATION	7.00%	6.32%
DEPARTMENTAL ADMINISTRATION	4.71%	4.25%
SPONSORED PROGRAMS ADMINISTRATION	9.01%	8.14%
TOTAL ADMINISTRATIVE RATE	24.36%	22.00%
BUILDING USE ALLOWANCE	0.36%	0.35%
IMPROVEMENT USE ALLOWANCE	0.04%	0.04%
EQUIPMENT USE ALLOWANCE	0.97%	0.95%
OPERATION & MAINTENANCE	6.58%	6.42%
LIBRARIES	1.28%	1.25%
TOTAL FACILITIES RATE	9.23%	9.00%
TOTAL RATE	33.59%	31.00%

Not all sponsored research should recover 46%. There are several common rates, including an off-campus rate (26%), a public service rate broken down in Table 4 (31%), a clinical trials rate (25%), two rates the state commonly allows (5% and 8%); and we do not charge overhead on funds that simply pass through OSURF.

The amounts of F&A recovered at various rates in FY 1999 were:

Research at 46%	$34,329,590
Public Service at 31%	$ 1,296,327
Off Campus at 26%	$ 959,492
Other	$ 2,830,383
Total	**$39,415,792**

This shows that the majority of F&A is recovered by grants carrying the full 46% rate. The fraction of grants that recover this rate varies by sponsor. In FY 1998, 75% of all federal grants, 40% of all foundation/non-profit grants, 66% of all industrial grants, and 10% of all state grants paid the full 46%; and the net result was that 68% of all grant activity was at the full rate. This fraction also varied by college, as shown in Table 5.

Table 5. F&A recovered by various units

	other rate	at 46%
Bio Sci	149,812	2,302,383
Ed	1,201,426	1,733,693
Engr	494,052	8,726,165
Human	39,161	157,850
MAPS	319,498	3,205,669
Med	908,559	7,820,771
Ofc Rsch	477,467	1,558,799
SBS	96,784	2,836,898
Total	**3,686,759**	**28,342,228**

There is nothing to indicate that this is not an appropriate mix of sponsored activities, and Budget Restructuring should employ rules that recognize that the cost of various types of research differ. This is most easily accomplished by returning as much of the F&A recovered to a cost center as close to the PI as possible, and assigning costs accordingly. However, rules that assume all costs above the level of the cost center are a fixed percentage of MTDC must be carefully examined since many costs should not scale this way.

Appendix B: Implications of F&A Returns

To get some idea of the implications of our recommendations, consider units that bring in most of the F&A we recover. Table 6 shows F&A recovered in FY 1999 at the 46% rate, and a division of those recoveries that is consistent with the rate breakdown we negotiated, shown in Table 3.

Table 6. IDC at 46% broken down

	FY 99 F&A Recovered at 46% Rate	College/Dept. Admin. 15.28/46 29.67%	OSURF Portion 7.66/46 = 16.7%	OR 3.07/46= 6.65%	Library 1.44/46= 3.00%	Space IDC 13.65/46 = 29.67%	Equip. Use 4.91/46= 10.67%
Bio Sci	2,302,383	764,621	384,498	153,108	69,071	683,117	245,664
Ed	1,733,693	575,759	289,527	115,291	52,011	514,387	184,985
Engr	8,726,165	2,897,959	1,457,270	580,290	261,785	2,589,053	931,082
Human	157,850	52,422	26,361	10,497	4,736	46,834	16,843
MAPS	3,205,669	1,064,603	535,347	213,177	96,170	951,122	342,045
Med	7,820,771	2,597,278	1,306,069	520,081	234,623	2,320,423	834,476
Ofc Rsch	1,558,799	517,677	260,319	103,660	46,764	462,496	166,324
SBS	2,836,898	942,134	473,762	188,654	85,107	841,708	302,697
Total	**28,342,228**	**9,412,454**	**4,733,152**	**1,884,758**	**850,267**	**8,409,139**	**3,024,116**

Fortunately, costs do not scale linearly as research volume increases. We should profit from efficiencies of scale, which reduce the fraction of administrative costs above the level of the cost center as volume grows. If we align the above allocations with our recommendations, we obtain Table 7.

Table 7. Recommended distribution of IDC at 46%

	FY 99 F&A Recovered at 46% Rate	College/Dept. Admin. 17/46 36.96%	OSURF Portion 6.0/46 = 13.04%	OR 3.0/46= 6.52%	Library 1.44/46= 3.00%	Space IDC 13.65/46 = 29.67%	Equip. Use 4.91/46= 10.67%
Bio Sci	2,302,383	850,961	300,231	150,115	69,071	683,117	245,664
Ed	1,733,693	640,773	226,074	113,037	52,011	514,387	184,985
Engr	8,726,165	3,225,191	1,137,892	568,946	261,785	2,589,053	931,082
Human	157,850	58,341	20,584	10,292	4,736	46,834	16,843
MAPS	3,205,669	1,184,815	418,019	209,010	96,170	951,122	342,045
Med	7,820,771	2,890,557	1,019,829	509,914	234,623	2,320,423	834,476
Ofc Rsch	1,558,799	576,132	203,267	101,634	46,764	462,496	166,324
SBS	2,836,898	1,048,518	369,931	184,966	85,107	841,708	302,697
Total	**28,342,228**	**10,475,287**	**3,695,827**	**1,847,913**	**850,267**	**8,409,139**	**3,024,116**

Appendix C: <u>Office of Research Investments under Budget Restructuring</u>

We have seen at least three different views of the OR expenditures, but there are clearly several expenditures that might be moved elsewhere under Budget Restructuring[10]. Consider FY 1998[11], during which the OR used Research Challenge money to fund:

- Interdisciplinary research $ 1,216,870
- Start-ups $ 410,456
- Academic Enrichment $ 971,425
- Seed Grants $ 858,359
- Matching Equipment $ 1,015,826
- IDC "Shortfall" $ 1,400,000

While each of these programs should be reviewed, probably all of them except the Seed Grants program should continue to be primarily administered and financed by the OR. The division of responsibility for the Seed Grant program should be re-visited if F&A is returned as we advocate. We do not believe that the accounting exercise that led to the IDC shortfall expenditure of $1.4M is consistent with the University's mission. This exercise, which currently determines the budget of the OR and which shows a debt of

[10] Any shifts should be made in a nearly budget-neutral manner at the start of Budget Restructuring, but they could have significant effects with re-basing and/or with real growth.
[11] All expenditures are not finalized, but these numbers are fairly accurate.

over $5M in the OR, should not be continued. It is absolutely essential that this agreement between the Office of Research and the Office of Finance be re-visited as part of Budget Restructuring, and a new understanding of the budget should be developed with the direct involvement of the Provost and the President. This is not a peripheral issue. This issue is central to the success of the university.

There is currently a balance of about $7.2M in the Research Challenge funds. A significant fraction of this money could be used to provide large start-up packages for the eminent faculty the Research Commission recommended we hire. This money should not be used to provide any annual rate funds.

The remaining OR investments in FY 1998 were:

- Interdisciplinary Centers $ 1,109,000
- Space rental $ 6,370,196
- Fee Authorizations $ 5,705,438
- Shared Facilities $ 1,573,960
- DDRS & CDRS $ 2,087,696
- College Base Allocations $ 471,316
- Distinguished Scholar Awards $ 141,579
- Discretionary Funds $ 59,680

Most of these expenditures should eventually be assigned elsewhere under Budget Restructuring.

The Interdisciplinary Centers should receive all or a portion of F&A they recover for administration and facilities, and except during a start-up phase when seed funds may be provided, F&A return should cover most expenses on this line. This is not a change in policy, but an explicit recognition of the OR's current policy.

Almost all of the space rental fees should be covered by F&A returned to the Centers, or it should be direct-charged. For Centers that use rented space, we have recommended that all but the library portion of F&A be returned to the Center. Space rental for OSURF should be covered by the 9% of MTDC retained by the central administration, and alternatives to their current space should be explored.

We have already discussed fee authorizations. Shared facilities expenditures should be carefully examined, but it seems likely that all or a significant portion of these expenditures should continue to be managed by the OR.

We recommend that all DDRS, CDRS, and the College Base Allocations be replaced under Budget Restructuring by other revenue streams the Colleges will receive, including the return of F&A that we have recommended. There is insufficient relationship between these "investments" and the research in Departments and Colleges. There is no clear indication that they are stimulating growth or improvement of research at the rate we need.

The Distinguished Scholar Awards should continue to be administered by the OR, and if anything they may need to be increased, although the program should be reviewed to insure that it is encouraging excellent research and not simply implementing political subsidies. There should be significant discretionary funds in the OR budget, but we do not recommend a specific amount or fraction.