



Testimony of

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“Examining the Overhead Cost of Research”

Madam Chairwoman, Mr. Chairman, and other distinguished members of the Research and Technology and Oversight Subcommittees, thank you for this opportunity to testify before you today. My name is Dale Bell and I have served as the National Science Foundation’s (NSF) Division Director for the Division of Institution and Award Support since 2015, previously serving as Deputy Division Director since 2010.

Since its establishment in 1950, the mission of NSF has been “to promote the progress of science; to advance the national health, prosperity and welfare; [and] to secure the national defense...” To do so, NSF has provided funding with an eye toward advancing the scientific frontier by investing in the most innovative and promising new research and education projects. NSF does this by awarding grants and cooperative agreements to approximately 2,000 organizations consisting of colleges, universities, K-12 school systems, businesses, science associations, and other research organizations.

The grants and cooperative agreements that NSF awards to our Nation’s universities, colleges, and other organizations are considered “assistance awards.” Those are awards that “entail the transfer of money, property, services or other things of value from the Federal Government to a State or local government or other recipient to accomplish a public purpose of support or stimulation. Assistance awards involve the support or stimulation of scientific and engineering research, science and engineering education or other related activities.”¹ Those grants and cooperative agreements include direct costs and indirect costs. I wish to emphasize that for our universities to be able to conduct the cutting-edge research that they do, both the direct and indirect are real costs that are essential to the conduct of research. Federally sponsored research is fundamentally a partnership between the Federal Government and institutions performing the research. Both are committed to achieving mutually beneficial outcomes, and both have demonstrated agreement to share in the costs of the enterprise. Studies have concluded that federal research grants cost universities more than is recouped through the direct and indirect costs, though measuring those costs is so complex that no definitive data is yet available. If the government does not pay for all costs associated with federally funded research, other entities will have to bear them, in effect subsidizing the federal government. Those costs may be borne through general fund dollars which include tuition, philanthropy, and other sources. Private sector funding of research – which is considerably less, in aggregate, than federal funding – generally does not carry indirect costs, or uses lower indirect cost rates. “Richer” institutions can make up additional indirect costs by utilizing endowments, but those sources are not always available in smaller institutions, minority serving institutions, and public universities.

Because the vast majority of NSF’s funding goes directly to the Nation’s universities and colleges through awards and cooperative agreements, NSF is mindful of the agency’s responsibility to be a careful steward of taxpayer dollars. We were pleased that the American Innovation and Competitiveness Act (AICA) recognized the importance of reducing administrative burdens on federally funded researchers – while continuing to protect the public interest through the transparency of, and accountability for, federally funded activities. NSF looks forward to participating in the interagency working group that the Office of Management and Budget (OMB) is tasked with leading under the AICA.

The Members of this Committee, the NSF Office of Inspector General (OIG), and the Government Accountability Office (GAO) have all been helpful in supporting the agency’s efforts to strengthen stewardship over taxpayer investments in the research enterprise. NSF looks forward to the release of the forthcoming GAO report that the Committee requested, which reviewed the processes and practices with which NSF determines indirect cost rates, to help ensure efficient and effective use of taxpayer dollars for science research and education. NSF appreciates the considerable study undertaken by the GAO on this topic.

Indirect costs are real and necessary costs of conducting research. They represent expenditures for shared services (e.g., facilities, laboratory supplies, utilities, computer networking, data storage, administrative support, government-mandated audits) incurred in the performance of, and integral to, research. The Federal Government has a longstanding practice of funding both direct and indirect costs. Unless paired with reductions in regulatory and administrative burdens, curtailing or ceasing reimbursement of indirect costs could include increases in tuition and adverse impacts on less well-endowed institutions (e.g., minority serving institutions, and two-year colleges).

¹ Federal Grant and Cooperative Agreement Act (31 U.S.C., 6301-08).

Background

I will provide an overview here of how NSF reimburses indirect costs. Our practices and policies are described in NSF's *Proposal and Award Policies and Procedures Guide* (PAPPG), along with NSF's *Grant General Conditions*, and the Office of Management and Budget's (OMB) *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*² (*Uniform Guidance*).

NSF reimburses awardees for direct costs, such as salaries, equipment, and travel that can be attributed to a specific project. NSF also funds indirect costs, which are those costs which are not readily identifiable with a particular cost objective directly tied to a specific research project, but that are necessary for the general operation of an organization and are difficult to allocate to individual research awards. Examples of indirect costs may include laboratory occupancy costs (rent, utilities, office supplies), hazardous chemical and biological agency management, libraries, internet, data transmission and storage, radiation safety, insurance, administrative services, and compliance with federal, state, and local regulations (e.g. Institutional Review Boards for human subject or animal research). Note that only resources utilized for research are counted, and the federal government partially reimburses awardees for these expenses.

Indirect costs are charged to federal awards through the use of an indirect cost rate. The indirect cost rate is used as a means to reimburse the awardee organization for the portion of shared expenses that the sponsored project used in the course of conducting its research and do not represent profit or fee. To calculate its indirect cost rate, the organization divides its claimed indirect costs (the indirect pool) by an equitable distribution base (the direct cost base). This calculation is done at the organization level; not on an award-by-award basis. The resulting percentage is the proposed indirect cost rate.

Specific guidelines for the construction of both the pool and the base are contained within the *Uniform Guidance*. Indirect cost rates for individual institutions are generally negotiated annually on behalf of the Federal Government by the cognizant agency for indirect costs. Per the *Uniform Guidance*, the cognizant agency is the federal agency that provides the predominance of direct federal funding to an awardee in a given year. The *Uniform Guidance* requires that the rate negotiated by the cognizant agency must be accepted by all federal agencies, except in certain circumstances where a different rate may be required by Federal statute or regulation. NSF complies with this requirement, and requires awardee organizations to charge indirect costs to NSF awards using the rates established by their cognizant federal agency.

NSF-Funded Indirect Costs

The amount of indirect costs budgeted to NSF awards has remained stable. Recent NSF analysis³ of data developed in the course of the GAO audit shows that annual funding for indirect costs across NSF's entire portfolio of awards averaged 20 percent of the total amount awarded over the 17-year period from fiscal year 2000 to fiscal year 2016. NSF's current active award portfolio consists of approximately 45,000 awards. Of NSF's total funding obligation of \$37.4 billion to support this portfolio, \$7.3 billion (19.5%) has been requested for indirect costs.⁴

² NSF Proposal & Award Policies & Procedures Guide (NSF 17-1, January 30, 2017); see https://www.nsf.gov/pubs/policydocs/pappg17_1/index.jsp. Office of Management and Budget, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, 2 CFR 200, (Washington, D.C.: December 2014).

³ GAO Analysis of data provided by National Science Foundation.

⁴ NSF makes most of its awards for multiple years. Therefore, NSF's active portfolio—awards currently being expended—includes more awards than NSF makes in a given year. NSF's active portfolio includes all current awards regardless of the fiscal year in which they were made, and it continuously changes as new awards are made and previous years' awards are closed.

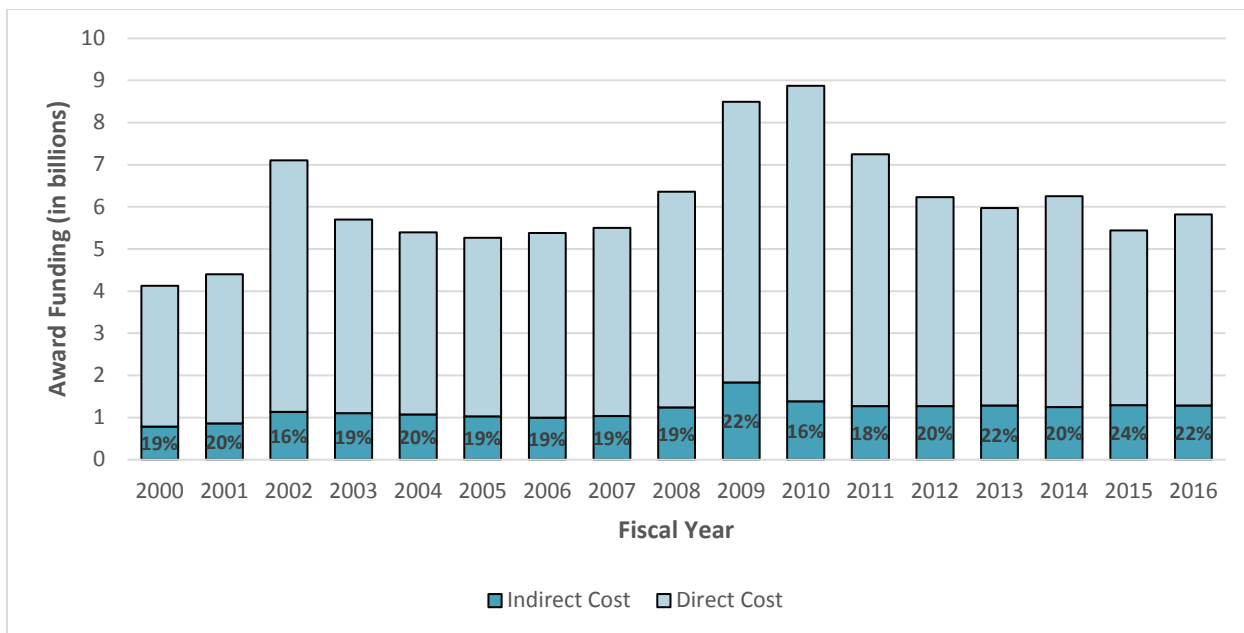


Figure 1: Analysis of NSF-Funded Direct and Indirect Costs, Fiscal Years 2000-2016

NSF is the cognizant agency for negotiating indirect costs for only 100 of its over 2,000 awardee organizations. Of the approximately 45,000 awards in NSF’s current portfolio, 98.5% were made to organizations that negotiate indirect cost rate agreements with other federal agencies. Organizations for which NSF holds indirect cost rate cognizance consist of non-profit organizations, such as independent research institutes, laboratories, museums, and professional scientific societies, foundations, and consortiums.

Unlike many other federal agencies, NSF does not hire researchers or directly operate laboratories or similar facilities. Instead, NSF supports scientists, engineers and educators directly through their home institutions (typically colleges and universities). Colleges and universities comprise 91% of NSF’s awardees.

NSF does not negotiate indirect cost rates for colleges and universities. Per the *Uniform Guidance*, indirect cost rate negotiation cognizance for all Institutions of Higher Education (IHEs) is assigned to the Department of Health and Human Services (HHS) or the Department of Defense’s Office of Naval Research (DoD), depending on which of the two agencies (HHS or DoD) provides more funds to the educational institution for the most recent three years. Indirect cost rates negotiated for colleges and universities are regulated by the *Uniform Guidance*, which requires that institutions identify indirect costs by cost groupings – Depreciation, Interest, Operation and Maintenance Expenses, General Administration and General Expenses, Departmental Administration Expenses, Sponsored Projects Administration, Library Expenses, and Student Administration and Services. The *Uniform Guidance* sets a recovery cap of 26% on all administrative components of the indirect costs; any indirect costs exceeding the 26% cap are absorbed by the IHE. This cap on administrative costs has been in place since 1991.

Oversight, Accountability, and Stewardship

Accountability over indirect costs starts with the rate negotiation process. The *Uniform Guidance* sets requirements to be applied by all Federal agencies. All entities for which NSF has rate cognizance are required to regularly submit indirect cost rate proposals for review. The negotiation process⁵ begins with submission of that proposal and supporting documentation. The proposal contains a calculated indirect cost rate based on actual cost data for a period (usually the organization's fiscal year), schedules that support the rate calculation, a Cost Policy Statement (CPS) or similar document that states how categories of costs are accounted for at the organization, actual financial data (audited financial statements and/or tax returns), single audit reports, and organizational policies and procedures. A Certification of Indirect Costs, mandated by the *Uniform Guidance*, requires the organization to certify that the proposal has been prepared in accordance with the prevailing cost principles, has been screened for unallowable and unallocable costs, and assurance that costs incurred in support of lobbying activities have been removed from the indirect cost pool.

When reviewing a proposal from an organization for which NSF is the cognizant agency, a rate negotiator, an expert in cost analysis, verifies reconciliation of the rate calculation to the financial data provided and accuracy of the rate itself, especially ensuring that costs have been allocated as indirect, direct, or excluded in accordance with the *Uniform Guidance* or prevailing cost principles. The rate negotiator also reviews the costs included in the indirect cost pool to screen for any potential unallowable costs that may not have been removed, and to confirm that the calculation has been constructed in a manner consistent with the organization's CPS. A trend analysis is also constructed, which allows the rate negotiator to identify any large increases or decreases to individual components of the pool. Based on this analysis, the negotiator recommends adjustments to both the pool and the base. The resulting negotiated rate is issued to the awardee using a Negotiated Indirect Cost Rate Agreement (NICRA) which is signed by NSF officials and the organization. The NICRA is honored by all federal agencies going forward, consistent with the *Uniform Guidance*. Indirect cost rates are negotiated for a defined period of time, generally the organization's fiscal year. Typically, an organization initiates a new indirect cost rate negotiation annually. NSF documents its indirect cost rate negotiation process in standard operating guidance, which are reviewed annually as part of NSF's internal control framework.

NSF exercises oversight of the application of indirect cost rates primarily through the audit process. Single Audit requirements under the *Uniform Guidance* (previously OMB circular A-133 / Single Audit Act) outline steps to be taken by the independent audit firm specific to indirect costs. These steps include review of the indirect cost rate calculation (pool and base) and application of the approved rate to claimed indirect costs on individual awards. Single Audits are required for awardee organizations, excluding for-profits, that expend more than \$750,000 in federal resources during the previous fiscal year. In addition to Single Audits, NSF Management procures its own audits of selected Large Facility Projects. These audits include an assessment of incurred costs for construction and operations. Incurred cost audits include a review of direct and indirect costs claimed. The NSF OIG Audit Office also performs incurred cost audits of NSF awardees. NSF Management is responsible for resolving all issues raised in these audit reports. NSF post-award advanced monitoring efforts includes site visits and desk reviews of awardee organizations that manage NSF's highest risk awards. These activities may include a module verifying amounts drawn down on NSF awards which would entail a verification of appropriate application of the indirect cost rate.

⁵ See <http://www.nsf.gov/bfa/dias/caar/docs/idsubmissions.pdf> for indirect cost rate proposal submission requirements.

In addition, NSF transaction testing under its implementation of the Improper Payments Act includes monitoring of indirect costs. If selected transactions represent charges for indirect costs then the review would include verification of the awardees' use of the appropriate indirect cost rate application.

Excellence in stewardship is an NSF strategic goal. The agency welcomes the oversight provided by this Committee, the NSF OIG, and the GAO, and remains a fully engaged partner in ensuring accountability for taxpayer investments in the federal research enterprise.

Conclusion

Madam Chairwoman, Mr. Chairman, and members of the Subcommittees, I hope my testimony clearly explains NSF's policies and role in negotiating and monitoring indirect costs. I hope too that I have been clear that the total NSF investment – both the direct and indirect costs – are critical to the ongoing advancement of US science. This concludes my testimony. I will be pleased to answer any questions the Members may have.