



National Science Foundation • Office of Inspector General  
4201 Wilson Boulevard, Arlington, Virginia 22230

## MEMORANDUM

**DATE:** June 12, 2015

**TO:** Dr. France A. Córdova  
Director, National Science Foundation

Martha A. Rubenstein  
Chief Financial Officer

**FROM:** Dr. Brett M. Baker   
Assistant Inspector General for Audit

**SUBJECT:** *Audit of NSF's Compliance with the Improper Payments Elimination and Recovery Act for FY 2014, Report No. 15-2-007*

This memo transmits Cotton and Company's report for the audit of NSF's compliance with the Improper Payments Elimination and Recovery Act of 2010 (IPERA). The audit objective was to review the improper payment reporting in NSF's FY 2014 Annual Financial Report (AFR), and accompanying materials, to determine whether the agency met the Office of Management and Budget (OMB)'s criteria for compliance with IPERA (Public Law 111-204).

### Results of Audit

The auditors found that NSF did not comply with the reporting requirements of IPERA in the FY 2014 Annual Financial Report (AFR). Specifically, the auditors found that NSF did not fully comply with two of the six IPERA reporting requirements, and they were unable to conclude whether NSF complied with the remaining four requirements.

The auditors recommended that NSF take appropriate action to improve compliance with IPERA, to include executing a full, statistically valid estimate of improper payments, and reporting additional improper payment identification and recapture details in future AFRs. In its response to the draft report, NSF stated its belief that the agency is compliant with IPERA requirements. NSF maintained that adjustments that grantees identify and correct through their own internal controls should not be considered improper payments, and that management is concerned that the findings on grantee adjustments would require changes in NSF's award administration policy. NSF also acknowledged the identification of opportunities to improve the way in which NSF documents its IPERA risk assessment. NSF's response is included in its entirety in Appendix A.

The auditors commented on NSF's response by noting that the audit results do not suggest that all adjustments be considered improper, only those payments that were made in error – such as to the incorrect recipient or in the incorrect amount – and then subsequently corrected. Per IPERA and OMB Memorandum M-15-02, these payments should be considered improper. True adjustments made by the grantee, such as payments initially made based on an estimate and then subsequently adjusted to represent the actual payment, should not be considered improper. The auditors also noted that the audit results indicated the lack of a systematic method of executing the qualitative and quantitative IPERA risk assessment, not just deficiencies in the documentation of the risk assessment. The auditors concluded that their determination of NSF's non-compliance with IPERA was appropriate and consistent with IPERA and OMB Memorandum M-15-02.

### **Corrective Action Plans**

To comply with OMB Circular A-50 requirements for audit follow up, please provide us your written corrective action plan to address the report recommendations within 60 calendar days. This corrective action plan should detail specific actions and milestone dates.

In addition, OMB Memorandum M-15-02 instructs agencies that are not compliant with IPERA to submit a plan to the Senate Homeland Security and Government Affairs Committee, the House Committee on Oversight and Governmental Reform, and the OMB, describing the actions that the agency will take to become compliant. The plan must be submitted within 90 days of the date of this final report, and include the following details:

- Measurable milestones to be accomplished in order to achieve compliance for each program or activity;
- The designation of a senior agency official who shall be accountable for the progress of the agency in coming into compliance for each program or activity; and
- The establishment of an accountability mechanism, such as a performance agreement, with appropriate incentives and consequences tied to the success of the senior agency official in leading agency efforts to achieve compliance for each program and activity.

### **OIG Oversight of Audit**

To fulfill our responsibilities under Government Auditing Standards, the Office of Inspector General:

- Reviewed the Cotton and Company team's approach and planning of the audit;
- Evaluated the qualifications and independence of the auditors;
- Monitored the progress of the audit at key points;
- Coordinated periodic meetings with the Cotton and Company team and NSF officials, as necessary, to discuss audit progress, findings, and recommendations;
- Reviewed the audit report, prepared by the Cotton and Company team, to ensure compliance with Government Auditing Standards; and
- Coordinated issuance of the audit report.

Cotton and Company is responsible for the attached auditor's report on NSF's compliance with IPERA and the conclusions expressed in the report. We do not express any opinion on the conclusions presented in the Cotton and Company team's audit report.

We thank your staff for the assistance that was extended to our auditors during this audit. If you have any questions regarding this report, please contact Thomas Moschetto at 703-292-7398.

Attachment

cc: Richard Buckius            Shirl Ruffin  
Allison Lerner                Ruth David  
Rafael Cotto                 Thomas Moschetto  
John Lynskey                 Christina Sarris  
Mike Howe                    Susan Carnohan  
Laura Rainey                 Karen Scott  
Catherine Walters            Carol Eyermann  
Lawrence Rudolph            Mike Van Woert  
Fae Korsmo                    Ann Bushmiller

PERFORMANCE AUDIT OF THE  
NATIONAL SCIENCE FOUNDATION'S  
COMPLIANCE WITH THE  
IMPROPER PAYMENTS ELIMINATION AND RECOVERY ACT  
OF 2010  
FOR  
FISCAL YEAR 2014

Final Report

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**NATIONAL SCIENCE FOUNDATION  
IMPROPER PAYMENTS ELIMINATION AND RECOVERY ACT (IPERA)  
PERFORMANCE AUDIT  
FY 2014**

**I. EXECUTIVE SUMMARY**

This report presents the results of the work that Cotton & Company LLP conducted to address performance audit objectives related to the National Science Foundation (NSF)'s fiscal year (FY) 2014 improper payment reporting included in its FY 2014 Agency Financial Report (AFR). Our work was performed during the period from April 1, 2015 through May 15, 2015. Our results are as of May 15, 2015.

We conducted this performance audit in accordance with Generally Accepted Government Auditing Standards (GAGAS). Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on the audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings based on the audit objectives.

The objective of this performance audit was to review the improper payment reporting in NSF's FY 2014 AFR and accompanying materials to determine whether the agency met the Office of Management and Budget (OMB)'s criteria for compliance with the Improper Payments Elimination and Recovery Act of 2010 (IPERA), Public Law 111-204. As part of our compliance review of NSF's improper payment reporting, we evaluated the accuracy and completeness of agency reporting and efforts performed in reducing and recapturing improper payments.

OMB Memorandum M-15-02, *Appendix C to Circular No. A-123, Requirements for Effective Estimation and Remediation of Improper Payments*, states that compliance under IPERA means that the agency has:

- Published an AFR or Performance and Accountability Report (PAR) for the most recent fiscal year and posted that report and any accompanying materials required by OMB on the agency website.
- Conducted a program-specific risk assessment for each program or activity that conforms with Section 3321 of Title 31 U.S.C. (if required).
- Published improper payment estimates for all programs and activities identified as susceptible to significant improper payments under its risk assessment (if required).
- Published programmatic corrective action plans in the AFR or PAR (if required).
- Published, and is meeting, annual reduction targets for each program assessed to be at risk and estimated for improper payments (if required and applicable).
- Reported a gross improper payment rate of less than 10 percent for each program and activity for which an improper payment estimate was obtained and published in the AFR or PAR.

We found that NSF did not comply with the reporting requirements of IPERA in the FY 2014 AFR. We identified the following compliance issues:

- NSF did not implement a complete, accurate, and systematic method to identify programs that are susceptible to significant improper payments.
- NSF did not properly report on improper payment recoveries in the FY 2014 AFR.

Because NSF did not implement a complete, accurate, and systematic method to identify programs that are susceptible to significant improper payments, we were unable to conclude whether it met the remaining four compliance requirements.

The contents of this report were discussed in an exit conference with NSF management on May 28, 2015. In its response to the draft report (see Appendix A), NSF management stated that they believe NSF is compliant with OMB Memorandum M-15-02 and are therefore considering alternative approaches to address the findings.

## **II. BACKGROUND**

The Improper Payments Elimination and Recovery Act of 2010 (IPERA), Public Law (PL) 111-204, dated July 22, 2010, amended the Improper Payments Information Act of 2002 (IPIA), PL 107-300. IPERA requires agencies to periodically review and identify programs and activities that may be susceptible to significant improper payments, and to report on their actions to reduce and recover improper payments. As directed under IPERA, OMB issued Memorandum M-11-16, *Issuance of Revised Parts I and II to Appendix C of OMB Circular A-123*, on April 14, 2011. This memorandum provides agencies with detailed guidance on the implementation of IPERA. The enactment of the Improper Payments Elimination and Recovery Improvement Act of 2012 (IPERIA), PL 112-248, dated January 10, 2013, provided an opportunity for OMB to re-examine existing guidance to ensure that agencies are more effectively reducing improper payment rates while also complying with multiple legislative and administrative requirements.

OMB issued Memorandum M-15-02, *Appendix C to Circular No. A-123, Requirements for Effective Estimation and Remediation of Improper Payments*, on October 20, 2014. This memorandum modifies all prior OMB Circular A-123, Appendix C guidance. Part II, Section A, Subsection 3 of OMB Memorandum M-15-02 expands on the Inspector General (IG)'s responsibilities as outlined in IPERA, including:

- Reviewing agency improper payment reporting in the agency's annual AFR and accompanying materials.
- Determining if the agency is in compliance with IPERA.

The IG is also directed to evaluate the accuracy and completeness of agency improper payment reporting, as well as the agency's performance in reducing and recapturing improper payments.

The *Objectives, Scope, and Methodology* section of this report (Appendix B) has been designed to address the IG's responsibilities as described in Part II, Section A, Subsection 3 of OMB Memorandum M-15-02.

## **III. AUDIT RESULTS**

Based on the results of the audit, NSF did not meet two of the applicable OMB criteria for compliance noted in the audit objectives. The following table identifies each criterion and states

whether NSF met the criterion. The two findings discussed below provide support for our conclusions.

OMB Criteria for IPERA Compliance	Results	Explanation of Results
Published an AFR or PAR for the most recent fiscal year and posted that report and any accompanying materials required by OMB on the agency website.	Did Not Meet	NSF published an AFR for FY 2014 and posted the report and accompanying materials to the agency website; however, the information was not complete and reported in accordance with OMB A-136 reporting requirements. <b>See Finding 2.</b>
Conducted a program-specific risk assessment for each program or activity that conforms with Section 3321 of Title 31 U.S.C. (if required).	Did Not Meet	NSF conducted a program-specific risk assessment; however, the risk assessment did not use a complete, accurate, and systematic method. <b>See Finding 1.</b>
Published improper payment estimates for all programs and activities identified as susceptible to significant improper payments under the agency's risk assessment (if required).	Unable to Conclude	NSF's risk assessment concluded that its singular program <sup>1</sup> was not susceptible to significant improper payments; NSF was therefore not required to publish an improper payment estimate.  Due to the issues identified in Finding 1, we were unable to conclude whether NSF's determination was appropriate and were therefore unable to conclude whether NSF had met this compliance requirement.
Published programmatic corrective action plans in the AFR or PAR (if required).	Unable to Conclude	NSF's risk assessment concluded that its singular program was not susceptible to significant improper payments and did not publish an improper payment estimate; NSF was therefore not required to publish programmatic corrective action plans in the AFR or PAR.  Due to the issues identified in Finding 1, we were unable to conclude whether NSF's determination was appropriate and were therefore unable to conclude whether NSF had met this compliance requirement.
Published, and is meeting, annual reduction targets for each program assessed to be at risk and estimated for improper payments.	Unable to Conclude	NSF's risk assessment concluded that its singular program was not susceptible to significant improper payments; NSF was therefore not required to publish an improper payment estimate or to publish and meet annual reduction targets.

<sup>1</sup> OMB Circular A-11, Section 57 specified that NSF had one program that required reporting for improper payments, research and education grants, and cooperative agreements. As such, NSF combines its four largest appropriations into a singular program, grants, for IPERA reporting purposes.

OMB Criteria for IPERA Compliance	Results	Explanation of Results
		Due to the issues identified in Finding 1, we were unable to conclude whether NSF's determination was appropriate and were therefore unable to conclude whether NSF had met this compliance requirement.
Reported a gross improper payment rate of less than 10 percent for each program and activity for which an improper payment estimate was obtained and published in the AFR or PAR.	Unable to Conclude	NSF's risk assessment concluded that its singular program was not susceptible to significant improper payments; NSF therefore did not publish an improper payment estimate.  Due to the issues identified in Finding 1, we were unable to conclude whether NSF's determination was appropriate and were therefore unable to conclude whether NSF had met this compliance requirement.

**Compliance Findings**

We identified two criteria for which NSF did not meet the IPERA compliance requirements as outlined in OMB Memorandum M-15-02. The specific findings are discussed in detail below.

**Finding 1 – NSF’s risk assessment did not use a systematic method and did not evaluate all required risk factors.**

In its FY 2014 AFR, NSF management described the risk assessment as using a qualitative and quantitative approach. Determining risk susceptibility through a qualitative and quantitative approach is consistent with IPERA and OMB’s implementation guidance, Memorandum M-15-02; however, NSF management did not comply with this guidance, as it did not maintain evidence of the evaluation and conclusions reached for all of the required risk factors and failed to follow a systematic approach in executing the qualitative and quantitative risk assessment, as follows:

1. NSF management did not maintain sufficient evidence of the evaluation and conclusions reached for all of the risk factors required per OMB Memorandum M-15-02, which states, “At a minimum, agencies shall take into account the following risk factors likely to contribute to improper payments, regardless of which method (quantitative or qualitative) is used...” and goes on to describe the nine factors that must be considered. NSF’s FY 2013 – 2014 Risk Assessment Report For Improper Payments (Risk Assessment Report) summarizes the results of NSF’s risk assessment; however, it does not contain any evidence that seven of the nine required factors were considered at the agency level. To demonstrate that the agency considered OMB’s risk factors, the Risk Assessment Report should include a discussion of the factors, including management’s assessment of the risk level and the rationale behind this assessment. It should also demonstrate the connection between the assessment of the nine risk factors and the conclusions reached for each of NSF’s programs (grants) and activities (contracts and payroll). NSF’s qualitative risk assessment only evaluated these nine risk factors at the grantee level, rather than at the agency level as required.

NSF's Risk Assessment Report considered Risk Factor 3, *The volume of payments made annually*, and Risk Factor 8, *Significant deficiencies in the audit reports of the agency including, but not limited to, the agency Inspector General or the Government Accountability Office (GAO) audit report findings, or other relevant management findings that might hinder accurate payment certification*; however, it did not provide sufficient evidence of the evaluation and conclusions reached for the following seven risk factors:

- 1) *Whether the program or activity reviewed is new to the agency*
- 2) *The complexity of the program or activity reviewed, particularly with respect to determining correct payment amounts*
- 4) *Whether payments or payment eligibility decisions are made outside of the agency, for example, by a State or local government, or a regional Federal office*
- 5) *Recent major changes in program funding, authorities, practices or procedures*
- 6) *The level, experience, and quality of training for personnel responsible for making program eligibility determinations or certifying that payments are accurate*
- 7) *Inherent risks of improper payments due to the nature of agency programs or operations*
- 9) *Results from prior improper payment work*

2. NSF management did not maintain a systematic approach in executing the qualitative and quantitative risk assessment.

- a) While OMB does not require statistical validity to be part of the risk assessment, NSF's risk assessment states, "This testing was performed using a statistical sample, as required by the IPERA guidance, with a statistically valid interactive, two-stage cluster sampling approach developed with a statistician (...) for performing a full testing of the grant activity (...) to IPERA reporting standards." To perform this testing, NSF selected an appropriate probability proportional to size (PPS) sample for grants at the primary sampling unit (PSU) level (i.e., the drawdown/NSF payment level) and an appropriate random sample of selected PSUs according to the approach outlined in its Alternative Sampling Estimation Plan.

As stated in the Risk Assessment Report, NSF tested 47 percent of the absolute value of selected NSF payments at the drawdown level and 53 percent of the absolute value through sub-sampling at the secondary sampling unit (SSU) level (i.e., the grantee transaction level). Due to time constraints, NSF was unable to complete the testing of the sample at the SSU level and did not maintain the randomness of the selected payments tested at this level. In addition, NSF's decision to test some samples at the drawdown level was inconsistent with the approach outlined in the sampling methodology. Per discussion with management, drawdowns are sometimes based on estimates and are difficult to assess for improper payment attributes.

Based on the results of testing conducted by NSF's testing team, NSF calculated an initial estimated potential improper payment value of \$386,016,786. NSF management then followed up on exceptions identified by the testing team that had been included in the initial extrapolation and determined that the majority of the payments initially identified as improper were, in fact, proper. This adjudication

process at both the PSU and SSU levels resulted in a final estimated improper payment value of \$173,644. NSF did not recalculate the projection and precision of the final estimated improper payment value to ensure that it had achieved the desired precision.

Because NSF did not complete a random sample at the SSU level, relied on testing of sample items at the drawdown level, and did not recalculate the projection and precision, its evaluation did not follow a systematic approach and was not consistent with the statistical methodology outlined in the Alternative Sampling Estimation Plan.

- b) NSF's final adjudication of the 12 transaction-level (i.e., SSU) potential improper payments incorrectly concluded that 8 of the payments were proper. NSF did appropriately deem four transaction-level sample items to be improper; however, we concluded that the remaining eight transaction-level items should also have remained improper after adjudication. Specifically:
  - i. For six of the eight transactions, NSF concluded that while the transactions had initially been made in error (e.g., charges made to an incorrect award, charges for an unallowable cost, or charges made in an incorrect amount due to a calculation error), the grantee had subsequently corrected the error and the transactions were therefore proper; however, these transactions are improper payments because they were improper at the time they were made. Per OMB Memorandum M-15-02, "IPERIA requires agencies to include all improper payments that were identified in the sample in the reported estimate, regardless of whether the improper payment has been or is being recovered."
  - ii. For two of the eight transactions, NSF was unable to conclude at the time of testing whether the payment was allowable. These transactions are therefore improper, as OMB Memorandum M-15-02 clarifies that "...when an agency's review is unable to discern whether a payment was proper as a result of insufficient or lack of documentation, this payment must also be considered an improper payment."
- c) In evaluating NSF's risk of improper payments, management relied heavily on the quantitative testing of 1,082 grant transactions. We sampled 45 of the grant transactions that NSF tested in the application of its risk assessment and conducted re-performance testing of the 7 attributes included in NSF's test plans to evaluate whether the payments should have been deemed improper. We found that we were unable to reach the same conclusion as NSF did for 6 of the 45 sample items tested. Specifically:
  - i. We noted one instance in which our re-performance testing did not produce the same result as NSF's testing did. The transaction occurred after the end of the award period (Attribute 3) and therefore should have been deemed improper; however, NSF concluded that the payment was proper.
  - ii. We noted five instances in which we were unable to re-perform testing on all seven attributes based on the supporting documentation provided and were therefore unable to arrive at the same conclusions that NSF did.

- For 4 of the 45 samples, the audit team was unable to recalculate the transaction amount (Attribute 2), and we were therefore unable to conclude that the amount was proper.
  - For 1 of the 45 samples, NSF did not review adequate support for the expense, and we were therefore unable to conclude that the amount was proper (Attribute 2).
- d) NSF did not demonstrate that it had followed a systematic method in reviewing all programs and activities to identify those that may be susceptible to significant improper payments, as required by IPERA. While NSF began the risk assessment with a population of all FY 2013 disbursements and began to break that population down into programs and activities, we were unable to verify whether NSF included payments to federal employees and charge card payments in the risk assessment, as required by OMB Memorandum M-15-02.
- e) Per OMB Memorandum M-15-02, “All agencies shall institute a systematic method of reviewing all programs and identify programs susceptible to significant improper payments.” NSF performed a qualitative and quantitative assessment of its programs and, in its FY 2014 AFR, concluded, “The risk assessment did not indicate significant susceptibility to improper payments for NSF grants.” In addition, NSF’s Risk Assessment Report stated, “NSF has reviewed the susceptibility of contract payments to significant improper payments, and has deemed them low risk,” and identified the payroll payments’ risk of “significant improper payments as very low.” The Risk Assessment Report did not clearly articulate the rationale for these three conclusions, and we therefore cannot conclude that NSF followed a systematic method. The Risk Assessment Report also shows a lack of alignment between risk indicators and the conclusions of low risk, specifically with regard to the contracts activity and the grants program. For example:
- i. On Page 13, in Table 5: Risk Rankings, NSF summarizes the risk scores from the qualitative analysis. The table shows average risk scores as follows: Grants = 4, Cooperative Agreements = 4.3, and Contracts = 3.3. Though not clearly stated in the Risk Assessment Report, NSF’s risk-scoring criteria per its supporting document, the “Institution Level Perceived Risk Evaluation” spreadsheet, are 1 = None, 2 = Minimal, 3 = Moderate, 4 = Significant, and 5 = Material. Based on NSF’s own qualitative analysis, it is reasonable to conclude that the risk of improper payments is significant for grants, significant/material for cooperative agreements, and moderate/significant for contracts; however, NSF concluded that risk was low in all cases. NSF’s documentation does not include any additional explanation regarding mitigating controls or factors that would account for the final conclusion of low risk.
  - ii. On Page 13, NSF stated, “Additionally, NSF OIG’s Alert Memo on cooperative agreements found serious weaknesses in NSF’s cost surveillance measures and noted that NSF does not track the resolution of its reviews over cooperative agreements. The report also noted that Defense Contract Audit Agency (DCAA) audits of 3 cooperative agreements found unallowable contingency costs.” NSF’s documentation did not include any additional explanation regarding controls or factors that would mitigate this

risk; however, NSF concluded that the grants program (which includes the cooperative agreements) was low risk.

- iii. On Page 23, NSF evaluated financial processing and internal controls for grants as a 3, or moderate risk; however, the report also states, “18 deficiencies and 2 observations were noted that could result in improper payments focused on NSF’s oversight of payments with regard to timing, authorization and approval, manual processes, and monitoring. Two deficiencies were directly associated with Awards Management for a lack of support for desk reviews at award closing, and timely audit finding resolution.” NSF’s documentation did not include any additional explanation of controls or factors that would mitigate these risks; as a result, NSF’s risk ranking of “3” appears to be unsupported.
  - iv. On Page 27, NSF evaluated human capital for grants as a 3, or moderate risk; however, the report also states, “Although there is fairly low turnover in staffing, there are very few resources available to ensure proper monitoring and review of all Cooperative Agreements. Contractor staff is utilized to help alleviate the workload.” NSF’s documentation did not include any additional explanation of controls or factors that would mitigate this risk; as a result, NSF’s risk ranking of “3” appears to be unsupported.
  - v. On Page 30, NSF evaluated operations and management for contracts as a 1, or no risk; however, the report also states, “NSF’s largest contracts use complex invoicing due to the volume of costs invoiced at one time. This requires an in-depth invoice review and increases the risk of improper payments.” NSF’s documentation did not include any additional explanation of controls or factors that would mitigate this risk; as a result, NSF’s risk ranking of “1” appears to be unsupported.
- f) During the audit, NSF management stated that it tested contracts only to validate the results of the OMB Circular A-123 procure-to-pay assessment; however, the Risk Assessment Report states, “NSF decided to fully test the contract activity with both the internal control review and the improper payment review.” We were unable to verify how NSF’s quantitative assessment of contracts supported the conclusion that contracts are not susceptible to significant risk of improper payments. We noted the following issues in our review of NSF’s testing attributes and our re-performance testing that applied NSF’s two testing attributes to fifteen sampled contract outlays and one additional item:
- i. The criteria that NSF used in its quantitative assessment of contracts were inadequate to conclude whether payments were proper, as the attributes did not address the accuracy of the payment or whether the payment was allowable under the terms of the contract. NSF only reviewed supporting documentation for contract samples to ensure that 1) the documentation related to the transaction, and 2) the support was dated prior to the transaction selected for review.
  - ii. NSF was inconsistent in annotating supporting documentation as part of its testing and relied on documentation that did not support the accuracy and validity of the contract outlay. For example, for 9 of the 16 contract outlays

reviewed, NSF relied on an easily-manipulated Excel spreadsheet or a separate summary report rather than on a formal invoice to support the accuracy and validity of the contract outlay.

- iii. We were unable to re-perform testing on 3 of the 16 contract outlays reviewed. Specifically, we were unable to verify that the documentation related to the sample transaction, as the documentation provided did not reconcile to the sample transaction amount.

IPERA, Public Law 111-204, dated July 22, 2010, Section 2, Subsection (a) states the following with regard to the requirements for conducting risk assessments:

*(a) IDENTIFICATION OF SUSCEPTIBLE PROGRAMS AND ACTIVITIES.*

- (1) IN GENERAL - The head of each agency shall, in accordance with guidance prescribed by the Director of the Office of Management and Budget, periodically review all programs and activities that the relevant agency head administers and identify all programs and activities that may be susceptible to significant improper payments. (...)*

*(3) RISK ASSESSMENTS –*

*(B) SCOPE – In conducting the reviews under paragraph (1), the head of each agency shall take into account those risk factors that are likely to contribute to a susceptibility to significant improper payments, such as –*

- (i) whether the program or activity reviewed is new to the agency;*
- (ii) the complexity of the program or activity reviewed;*
- (iii) the volume of payments made through the program or activity reviewed;*
- (iv) whether payments or payment eligibility decisions are made outside of the agency, such as by a State or local government;*
- (v) recent major changes in program funding, authorities, practices, or procedures;*
- (vi) the level, experience, and quality of training for personnel responsible for making program eligibility determinations or certifying that payments are accurate; and*
- (vii) significant deficiencies in the audit report of the agency or other relevant management findings that might hinder accurate payment certification.*

OMB Memorandum M-15-02, *Appendix C to Circular No. A-123, Requirements for Effective Estimation and Remediation of Improper Payments*, dated October 2014 and effective starting in FY 2014, provides the following guidance for conducting the risk assessment:

Part I, Section A, Subsection 2 states:

*An improper payment is any payment that should not have been made or that was made in an incorrect amount under statutory, contractual, administrative, or other legally*

*applicable requirements. Incorrect amounts are overpayments or underpayments that are made to eligible recipients (including inappropriate denials of payment or service, any payment that does not account for credit for applicable discounts, payments that are for an incorrect amount, and duplicate payments). An improper payment also includes any payment that was made to an ineligible recipient or for an ineligible good or service, or payments for goods or services not received (except for such payments authorized by law). In addition, when an agency's review is unable to discern whether a payment was proper as a result of insufficient or lack of documentation, this payment must also be considered an improper payment.*

*The term "payment" in this guidance means any disbursement or transfer of Federal funds (including a commitment for future payment, such as cash, securities, loans, loan guarantees, and insurance subsidies) to any non-Federal person, non-Federal entity, or Federal employee, that is made by a Federal agency, a Federal contractor, a Federal grantee, or a governmental or other organization administering a Federal program or activity. The term "payment" includes Federal awards subject to the Single Audit Act and the Uniform Guidance for Federal assistance (2 CFR 200 Subpart F) (Single Audits) that are expended by both recipients and sub-recipients.*

Part I, Section A, Subsection 4 states:

*The law anticipates that agencies will examine the risk of, and feasibility of recapturing, improper payments in all programs and activities administered. The term "program" includes activities or sets of activities recognized as programs by the public, OMB, or Congress, as well as those that entail program management or policy direction. This definition includes, but is not limited to, all grants including competitive grant programs and block/formula grant programs, non-competitive grants such as single-source awards, regulatory activities, research and development activities, direct Federal programs, all types of procurements (including capital assets and service acquisition), and credit programs. It also includes the activities engaged in by the agency in support of its programs.*

Part I, Section A, Subsection 5 states:

*IPERIA amended the definition of "payment" in IPIA to include payments made to Federal employees, in addition to payments made to non-Federal persons or entities. Therefore, agencies must include payments made to employees (including salary, locality pay, travel pay, and other payments to Federal employees) in the risk assessments (beginning in FY 2014) and, if applicable, in improper payment estimates (the following fiscal year). For improper payment reporting purposes, when a shared service provider is responsible for the actual disbursements of payments to employees (for example, payroll) on behalf of a customer agency, the customer agency and shared service provider should assess only the portions of the process that are within their respective control.*

Part I, Section A, Subsection 6 states:

*Agencies should include such payments in risk assessments (beginning in FY 2014) and, if applicable, in improper payment estimates (the following year). Agencies should leverage guidance in OMB Circular A-123, Appendix B – Improving the Management of Government Charge Card Programs – and OMB M-12-031 – Implementation of the*

Government Charge Card Abuse Prevention Act of 2012 – when performing these risk assessments.

Part I, Section A, Subsection 9 states:

*Unless an agency has specific written approval from OMB to deviate from the steps explained below, agencies are required to follow these steps to determine whether the risk of improper payments is significant and to provide valid annual estimates of improper payments. The agency is responsible for maintaining the documentation to demonstrate that the following steps (if applicable) were satisfied.*

*Step 1: Review all programs and activities and identify those that are susceptible to significant improper payments.*

(...)

*b. Systematic Method. All agencies shall institute a systematic method of reviewing all programs and identify programs susceptible to significant improper payments. This systematic method could be a quantitative evaluation based on a statistical sample or a qualitative method (e.g., a risk-assessment questionnaire). At a minimum, agencies shall take into account the following risk factors likely to contribute to improper payments, regardless of which method (quantitative or qualitative) is used:*

- i. Whether the program or activity reviewed is new to the agency;*
- ii. The complexity of the program or activity reviewed, particularly with respect to determining correct payment amounts;*
- iii. The volume of payments made annually;*
- iv. Whether payments or payment eligibility decisions are made outside of the agency, for example, by a State or local government, or a regional Federal office;'*
- v. Recent major changes in program funding, authorities, practices, or procedures;*
- vi. The level, experience, and quality of training for personnel responsible for making program eligibility determinations or certifying that payments are accurate;*
- vii. Inherent risks of improper payments due to the nature of agency programs or operations;*
- viii. Significant deficiencies in the audit reports of the agency including, but not limited to, the agency Inspector General or the Government Accountability Office (GAO) audit report findings, or other relevant management findings that might hinder accurate payment certification; and*
- ix. Results from prior improper payment work.*

(...)

*d. Examples. To further clarify use of the quantitative evaluation method for performing risk assessments in this step, we provide four examples:*

*Example 1: Under the analysis in Step 1, a program has a potential improper payment rate of 1.2 percent or \$14 million. Under this guidance an agency need not perform Step 2 – obtaining a statistically valid estimate of improper payments in the program – because even though the potential amount of improper payments in the program exceeds \$10 million, the potential improper payment rate does not exceed 1.5 percent.*

*Example 2: Under the analysis in Step 1, a program has a potential improper payment rate of 1.8 percent or \$9 million. Under this guidance, an agency need not perform Step 2 – obtaining a statistically valid estimate of improper payments in the program – because even though the potential improper payment rate exceeds 1.5 percent, the potential amount of improper payments in the program does not exceed \$10 million.*

*Example 3: Under the analysis in Step 1, a program has a potential improper payment rate of 1.8 percent and \$11 million. Under this guidance, an agency must perform Step 2 – obtaining a statistically valid estimate of improper payments in the program – because the potential improper payment rate exceeds 1.5 percent and the potential amount of improper payments exceeds \$10 million. The agency must report a statistically valid improper payment rate for the program in its annual AFR or PAR.*

*Example 4: Under the analysis in Step 1, a program has a potential improper payment rate of 0.6 percent and \$125 million. Under this guidance, regardless of the potential improper payment rate, the agency must perform Step 2 – obtaining a statistically valid estimate of improper payments in the program – because the potential amount of improper payments in the program exceeds \$100 million.*

*Step 2: Obtain a statistically valid estimate of the annual amount of improper payments in programs and activities for those programs that are identified in Step 1 as susceptible to significant improper payments.*

Part I, Section A, Subsection 13 states:

*IPERIA requires agencies to include all improper payments that were identified in the sample in the reported estimate, regardless of whether the improper payment has been or is being recovered.*

OMB Circular A-136, Section II.5.8, *IPIA (as amended by IPERA) Reporting Details*, Subsection I states:

*Any programs that had been previously identified in the former Section 57 of OMB Circular No. A-11 shall continue to report improper payment estimates, unless OMB has granted relief from reporting requirements (as discussed in OMB Circular No. A-123, Appendix C).*

NSF does not have adequate procedures in place to ensure that it has implemented a complete, accurate, and systematic method for the IPERA risk assessment.

NSF's assessment that its singular program, grants, is not susceptible to significant improper payments may be incorrect. Based on the information provided in the qualitative and quantitative risk assessment, both grants and contracts may be susceptible to significant improper payments.

As stated in the criteria above, OMB Circular A-136 requires that agencies report improper payment estimates for any programs previously identified in the former Section 57 of OMB Circular A-11, unless OMB has granted relief from reporting requirements. NSF does not currently have OMB-approved relief from reporting requirements. NSF's risk assessment does not comply with OMB Memorandum M-15-02 because it does not follow a systematic method of determining susceptibility to significant improper payments and therefore cannot support relief from the improper payment estimate reporting requirement.

### ***Recommendation***

1. We recommend that the NSF Chief Financial Officer take appropriate action to improve NSF's compliance with IPERA. Specifically, we recommend that NSF management execute a full, statistically valid estimate of improper payments for grants, and a separate estimate for contracts. These estimates should adhere to the requirements of OMB Memorandum M-15-02. In addition, NSF management shall perform the following in executing the estimates:
  - a. Evaluate test plans and testing guidance to ensure that improper payments are identified consistent with the definition of improper payments per OMB Memorandum M-15-02 or any written approvals of alternatives by OMB.
  - b. Select sample items using a statistically valid methodology that is certified by a statistician and that achieves the precision and confidence level requirements for OMB Memorandum M-15-02. NSF should consider evaluating the efficiency of its statistical sampling methodology to ensure that the sample size is such that the testing (at the transaction level, not the drawdown level) can be completed in a reasonable timeframe.
  - c. Execute testing and retain documentation necessary to support testing results in sufficient detail to enable external personnel to re-perform testing and to retain institutional knowledge for subsequent years' IPERA testing. Specifically, ensure that documentation is prepared in sufficient detail to enable an experienced auditor having no previous connection with the engagement to understand from the documentation the nature, timing, extent, and results of procedures performed and the evidence obtained and its source, as well as the conclusions reached, including evidence that supports NSF's conclusions.
  - d. After testing has been completed, calculate the achieved precision at the 90 percent confidence level. If the achieved precision exceeds the desired precision, consider what actions are necessary to reach the desired precision, such as performing additional sample testing.

### **Management's Comments**

NSF management stated that adjustments that grantees identify and correct through their own internal controls should not be considered improper payments. They are concerned that the findings on grantee adjustments would require changes in NSF's award administration policy. NSF management also acknowledged the identification of opportunities to improve the way in which NSF documents its IPERA risk assessment.

## **Auditors' Additional Comments**

The results of our audit do not suggest that all adjustments be considered improper, only those payments that were made in error – such as to the incorrect recipient or in the incorrect amount – and then subsequently corrected. Per IPERA and OMB Memorandum M-15-02, these payments should be considered improper. True adjustments made by the grantee, such as payments initially made based on an estimate and then subsequently adjusted to represent the actual payment, should not be considered improper. As previously described to NSF management, our determination of NSF's compliance with IPERA was appropriate and consistent with IPERA and OMB Memorandum M-15-02. The findings and recommendations in our report have no effect on NSF's award administration policy.

The results of our audit indicated the lack of a systematic method of executing the qualitative and quantitative IPERA risk assessment, not just deficiencies in the documentation of the risk assessment.

### **Finding 2 – NSF did not properly report on improper payment recoveries in the FY 2014 AFR.**

NSF did not report on improper payments identified and recovered through sources other than payment recapture audits. NSF concluded that payment recapture audits are not warranted for grants and contracts due to existing audit activities, such as the grant audit resolution process and cost-incurred audits on high-risk contracts; however, NSF did not report recoveries from these activities in the FY 2014 AFR.

Further, we were unable to validate how the internal control program testing results supported NSF's conclusion that payment recapture and recovery activities were not warranted for contracts. NSF's FY 2014 OMB Circular A-123 internal control program results include several issues that could increase susceptibility to improper payments, including:

- Lack of proper delegation of authority; specifically, no Contracting Officer's Representative (COR) delegation letter for the period under review
- Manual data entry errors, including contracts that were obligated before the award or modification document was signed and contracts with an incorrect award date
- Lack of documentation supporting transaction approval
- Purchase card transactions that do not have proper approval and purchase card holders that have not completed required trainings

Additionally, we reviewed documentation from the FY 2014 financial statement audit that indicates weaknesses in the scope and timeliness of NSF's cost-incurred audits. These factors indicate the need for further analysis to conclude whether additional recovery activities are warranted.

OMB Circular A-136, Section II.5.8 provides the following guidance with respect to improper payments reporting in the AFR:

#### *V. Recapture of Improper Payments Reporting.*

*a. An agency shall discuss payment recapture audit (or recovery auditing) efforts, if applicable. The discussion should describe: the agency's payment recapture audit program; the actions and methods used by the agency to recoup overpayments; a*

*justification of any overpayments that have been determined not to be collectable; and any conditions giving rise to improper payments and how those conditions are being resolved (e.g., the business process changes and internal controls instituted and/or strengthened to prevent further occurrences). If the agency has excluded any programs or activities from review under its payment recapture auditing program (including any programs or activities where the agency has determined a payment recapture audit program is not cost-effective), the agency should list those programs and activities excluded from the review, as well as the justification for doing so (i.e., a discussion of the analysis conducted to determine that a payment recapture audit program would not be cost-effective). Include in your discussion the dollar amount of cumulative recoveries collected beginning with FY 2004. (...)*

*d. As applicable, agencies should also report on improper payments identified and recovered through sources other than payment recapture audits. For example, agencies could report on improper payments identified through: statistical samples conducted under IPIA; agency post-payment reviews or audits; Office of Inspector General reviews; Single Audit reports; self-reported overpayments; or reports from the public. Specific information on additional required reporting for contracts was included in Section 7 of OMB memorandum M-11-04, issued in November 2010. Reporting this information is required for FY 2011 reporting and beyond. Agencies should use this chart to report this information. The information from Section 7 of OMB memorandum M-11-04 mentioned above may be included in the table or in narrative format below the table. If previous year (PY) information is not available, indicate by either note or by "n/a" in the relevant column or cell.*

IPERA, Public Law (PL) 111-204, Section 2, Subsection (h), Paragraph 2(A) states the following with regard to the requirements for recovery audits:

*(A) CONDUCT OF AUDITS – Except as provided under paragraph (4) and if not prohibited under any other provision of law, the head of each agency shall conduct recovery audits with respect to each program and activity of the agency that expends \$1,000,000 or more annually if conducting such audits would be cost effective.*

Further, OMB Memorandum M-15-02, Part I, Section D, Subsection 6 provides additional clarifying guidance:

*If an agency determines that it would be unable to conduct a cost-effective payment recapture audit program for certain programs and activities that expend more than \$1 million, then it must notify OMB and the agency's Inspector General of this decision and include any analysis used by the agency to reach this decision. OMB may review these materials and determine that the agency should conduct a payment recapture audit to review these programs and activities. In addition, the agency shall report in its annual AFR or PAR: 1) a list of programs and activities where it has determined conducting a payment recapture audit program would not be cost-effective; and 2) a description of the justifications and analysis that it used to determine that conducting a payment recapture audit program for these programs and activities was not cost-effective.*

NSF management did not have adequate procedures in place to ensure that information reported in the AFR is complete.

NSF is not in full compliance with the requirements of IPERA as outlined in OMB Memorandum M-15-02. In addition, the form and content of the information reported in NSF's FY 2014 AFR

are not in full compliance with the requirements of OMB Circular A-136, and information reported is not complete.

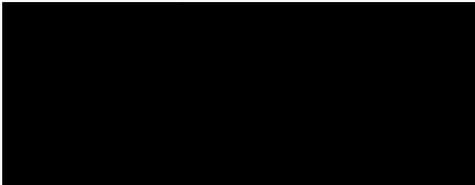
**Recommendation**

2. We recommend that the NSF Chief Financial Officer take appropriate action to ensure that NSF reports all elements required per OMB Circular A-136, and that the information is complete and accurate. Specifically, we recommend that NSF:
  - a. Report improper payments identified and recovered through sources other than payment recapture audits, including the NSF audit resolution process and cost-incurred audits on high-risk contracts, in order to demonstrate NSF's commitment to recovering federal funds that should not have been paid.
  - b. Re-evaluate the analysis for determining whether payment recapture audit and recovery activities are cost-effective for contracts, and retain sufficient documentation supporting the rationale and conclusions made.

**Management's Comments**

NSF management did not address this finding or the recommendations in its response.

COTTON & COMPANY LLP



Partner  
June 11, 2015

**APPENDIX A  
MANAGEMENT'S COMMENTS**



OFFICE OF BUDGET, FINANCE & AWARD MANAGEMENT

**M E M O R A N D U M**

DATE: JUN 5 2015

TO: Dr. Brett M. Baker, Assistant Inspector General for Audit

FROM: Ms. Martha A. Rubenstein, Chief Financial Officer and Head/BFA

SUBJECT: Management Response to Draft Fiscal Year (FY) 2015 Improper Payments Elimination and Recovery Act (IPERA) Performance Audit Report

This memorandum responds to your transmittal of the draft FY 2015 IPERA Audit Report dated June 1, 2015. Thank you for the opportunity to comment on the report.

We reviewed the Audit Report and appreciate the identification of opportunities for improvement in the way NSF documents its IPERA risk assessment. However, we believe NSF is compliant with Office of Management and Budget (OMB) M-15-02, "Appendix C to Circular A-123 *Requirements for Effective Estimation and Remediation of Improper Payments*." As a result, NSF is considering alternative approaches to address the findings. We provided more specific feedback via e-mail on the content of the report on May 28, 2015.

**Background:**

In FY 2012, NSF started the process of performing a comprehensive improper payment risk assessment. This process, as discussed in the FY 2014 Risk Assessment Report, identified "potential" improper payments. NSF then conducted further analysis of the risk assessment results to determine if any "potential" improper payments were deemed as actual improper payments. Based on the results of the further analysis and NSF's interpretation of the OMB M-15-02, the agency concluded that its grants program and activities were not susceptible to significant improper payments. This is consistent with NSF's history of very low improper payments.

NSF's FY 2014 improper payments internal control review demonstrates the agency's commitment to continual improvement in preventing and detecting improper payments and it included the following important aspects:

- Developed a qualitative and quantitative risk assessment, which outlined and discussed NSF's consideration of all nine federal guidance risk factors.
- Considered the "Systematic Method" risk factors for NSF's grants program (relates predominantly to entitlement agencies).
- Performed testing and reporting in accordance with OMB M-15-02.
- Determined risk susceptibility through a qualitative and quantitative approach (goes beyond OMB M-15-02, which only requires one type of approach).
- Supported the risk assessment with a compendium of information, which was coordinated with other internal controls work.
- Evaluated whether payment recapture audits and recovery activities were cost effective.

#### **Guidance Implementation:**

In key instances we disagree with the auditors' interpretation and application of the federal guidance. In addition, our research indicates that NSF's interpretation of the federal guidance is consistent with best practices at five other federal agencies.

- OMB M-15-02 sections on recovering improper payments should not apply to standard grantee adjustments.
- OMB M-15-02 requirements under Step 2, related to performing a full statistically valid estimate of improper payments, should not be applied to the risk assessment process since it was prepared under Step 1 of the guidance.
- Circular A-136 "Financial Reporting Requirements" provides important guidance on agency financial reporting; however, NSF does not consider it a primary criteria to determine compliance with IPERA.
- *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (2 CFR 200) provides for payment of pre-and post-award expenses and adjustments.

#### **Implications of Audit Findings**

The audit implies that all adjustments grantees make to their records should be considered improper payments. NSF considers adjustments that the grantee identifies and corrects through its own internal controls to be part of an effective and transparent financial management process. By categorizing these types of adjustments as improper payments, the audit is applying a "zero tolerance" policy.

We are concerned that the findings on grantee adjustments would require changes in policy that are not reasonable or feasible to implement. NSF would have to change its award administration policy to ensure that grantees understood that any expense

adjustments within their cost records would be considered evidence of improper payments. We do not believe this is the intent of the federal guidance.

We will be consulting with OMB regarding guidance interpretations in the audit and invite you to join us in those discussions. Please contact John Lynskey, Deputy Director, Division of Financial Management (703) 292-8280, if you have any questions or require additional information.

cc: Tom Moschetto, OIG  
Shirl Ruffin, DFM  
Rafael Cotto, DFM  
Christina Sarris, OD/OGC  
Joanna Rom, BFA

## **APPENDIX B OBJECTIVES, SCOPE, AND METHODOLOGY**

### **Objectives**

The objective of our performance audit was to determine if NSF met OMB's criteria for compliance with IPERA as described in OMB Memorandum M-15-02, including:

- Published an AFR or PAR for the most recent fiscal year and posted that report and any accompanying materials required by OMB on the agency website.
- Conducted a program-specific risk assessment for each program or activity that conforms with Section 3321 of Title 31 U.S.C. (if required).
- Published improper payment estimates for all programs and activities identified as susceptible to significant improper payments under its risk assessment (if required).
- Published programmatic corrective action plans in the AFR or PAR (if required).
- Published, and is meeting, annual reduction targets for each program assessed to be at risk and estimated for improper payments (if required and applicable).
- Reported a gross improper payment rate of less than 10 percent for each program and activity for which an improper payment estimate was obtained and published in the AFR or PAR.

We also evaluated the accuracy and completeness of agency improper payment reporting, and the agency's performance in reducing and recapturing improper payments.

### **Scope**

As established in OMB Memorandum M-15-02, the scope of this performance audit included reviewing the improper payment and reporting details in NSF's FY 2014 AFR, Appendix 2: *Improper Payments Elimination and Recovery Act Reporting*. We designed procedures to gain an understanding of the risk assessment that NSF performed to identify programs susceptible to significant risk of improper payments, which included having a statistical subject matter expert evaluate the statistical approach used in the risk assessment.

We also designed procedures to evaluate the completeness and accuracy of the information reported in Appendix 2, including re-performing testing of 15 randomly selected contract sample items, 1 additional contract sample item, and 45 randomly selected grant sample items that NSF had tested as part of the program-specific risk assessment.

In addition, we designed procedures to evaluate the agency's performance in reducing and recapturing improper payments.

We conducted this performance audit in accordance with Generally Accepted Government Auditing Standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on the audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings based on the audit objectives.

## Methodology

To verify compliance with IPERA, evaluate completeness and accuracy, and evaluate the agency's performance in reducing and recapturing improper payments, we:

- Reviewed NSF's FY 2014 AFR and confirmed that the report and any accompanying materials were posted to the agency website.
- Reviewed NSF's FY 2014 AFR and determined whether the presentation was in accordance with the form and content requirements outlined in OMB Circular No. A-136, *Financial Reporting Requirements*.
- Evaluated the completeness and accuracy of the IPERA reporting details presented in NSF's FY 2014 AFR.
- Confirmed whether NSF conducted a program-specific risk assessment and evaluated the results of the assessment.
- Evaluated the statistical sampling process that NSF applied in conducting the program-specific risk assessment.
- Evaluated the reasonableness of NSF's conclusions and the sufficiency of documentation supporting the results of testing procedures that NSF performed on sample items as part of the assessment process.
- Determined whether NSF published improper payment rate and dollar estimates for all programs and activities identified as susceptible to significant improper payments under the agency's risk assessment.
- Determined whether NSF was required to publish corrective action plans in its FY 2014 AFR.
- Determined whether NSF has published, and met, improper payment reduction targets for each program assessed and measured to be at risk for improper payments.
- Evaluated whether NSF reported a gross improper payment rate of less than 10 percent for each program and activity for which an improper payment estimate was obtained and published in the AFR.
- Evaluated other activities performed by NSF to reduce and recapture improper payments.

In addition, we evaluated whether NSF has taken appropriate corrective actions to address findings and recommendations from previous engagements that are significant within the context of the audit objectives.

In carrying out this methodology, we applied audit techniques such as inquiry, observation, and re-performance to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings related to the audit objectives.