



UNITED STATES DEPARTMENT OF EDUCATION
OFFICE OF INSPECTOR GENERAL


Information Technology Audits and Computer Crime Investigations
Computer Assisted Assessment Techniques Division

FINAL MANAGEMENT INFORMATION REPORT

DATE: 1/17/2013

TO: James W. Runcie
Chief Operating Officer
Federal Student Aid

David A. Bergeron
Acting Assistant Secretary
Office of Postsecondary Education

FROM: Charles E. Coe, Jr. 
Assistant Inspector General
Information Technology Audits and Computer Crime Investigations

SUBJECT: Management Information Report
Student Aid Fraud Ring Assessment
Control No. ED-OIG/X18M0001

The purpose of this management information report is to provide the Office of Federal Student Aid (FSA) and the Office of Postsecondary Education (OPE) with the results of our risk analysis regarding one type of student aid fraud ring activity associated with the electronic processing of Federal student aid applications. We refer to this type of fraud ring activity as school-based¹ because we developed our methodology by focusing on student aid recipient activity within each school. Although most of these identified recipients relate to distance education, our methodology assessed all school-based recipients.

We are attempting to identify other types of student aid fraud ring activity and may be able to report on such activity in the future. As this report will demonstrate, this school-based student aid fraud ring activity is a rapidly growing problem. The population of school-based recipients considered as potentially participating in this activity has increased 82 percent from award year (AY) 2009 (18,719 students) to AY 2012 (34,007 students). We identified a total of over 85,000 recipients who may have participated in this type of student aid fraud ring activity and who received over \$874 million in Federal student financial aid under Title IV of the Higher Education Act of 1965, as amended (Title IV funds or programs) during the period AY 2009 through AY 2012. Further, applying a statistical model, we estimated that \$187 million of this \$874 million in Title IV funds are probable fraud loss.

¹ School-based reflects the focus of the fraud assessment and does not intend to imply that we have any indication that school officials or anyone working at the institution was involved in the fraud ring activity.

Background

The Office of Inspector General (OIG) Office of Investigation Services issued Investigative Program Advisory Report (IPAR) “Distance Education Fraud Rings” (Control No. ED-OIG/L42-L0001) in 2011. The IPAR alerted FSA and OPE to significant fraud vulnerability in distance education programs and provided recommendations that, if implemented, would mitigate future risks of fraud ring activity in Title IV programs.

Although the IPAR described the problem of an increasing number of cases involving fraud rings—large, loosely affiliated groups of people who conspire to defraud Title IV programs through distance education programs—it did not identify the magnitude of the overall activity.

We now have quantified the risk of one type of fraud ring activity with a statistically supportable dollar estimate. In this report, we present our results in terms of Title IV funds for the entire 85,000 recipients who may have participated in the school-based student aid fraud ring activity, our supportable estimate of probable fraud loss, and our methodologies.

Identification of One Type of Fraud Ring Activity

For AY 2009 through AY 2012, more than 53.8 million recipients² received more than \$509.9 billion in Federal student financial aid under Title IV.³ As we noted in our “Distance Education Fraud Rings” IPAR, the growth in distance education has made Title IV programs more vulnerable because all aspects of it—admission, student financial aid, and instruction—take place on-line, and the students are not required to present themselves in person at any point. In addition, access to personal information using conventional and electronic means has made it easier for criminals to assume the identity of fictitious recipients and fraudulently apply for and obtain these funds.

To address this growing risk, the OIG developed a model of student aid fraud rings to assist in cases.⁴ The overall objective of this project was to develop an analytical model that would focus investigators’ attention as early as possible on the activities most at risk for being fraudulent. This model would also provide the capability of an automated, ongoing analytical process within the OIG to assist with audit planning and investigation resource management. The first phase of this project was to develop a model that would successfully detect, with a fairly high degree of probability, fraudulent or suspicious activities relating to school-based student aid fraud ring activity. The primary goal included identifying suspicious data associated with fraud ring participants enrolling at a school.

To identify the suspicious data, we developed a rule-based filter, which is a set of qualifying determinants that would eliminate those school-based recipients that do not meet minimum

² Though the 53.8 million student count represents a one-time count of students within each award year, there may be double counting of those students receiving awards in more than one year between AY 2009 thru AY 2012.

³ The Title IV programs included in our review were William D. Ford Federal Direct Loan Program loans, Federal Family Education Loan Program loans, Perkins loans, and Pell grants.

⁴ We used AY 2010 in which 19 million recipients’ received more than \$129.8 billion in Federal student financial aid under Title IV as our base year within the development process.

threshold school-based fraud patterns established within the model. That is, we filtered out those recipients who did not exhibit characteristics of an established school-based fraud pattern. We then applied this filter to student aid recipients from 14 school locations⁵ with suspected fraudulent activity in AY 2010, which resulted in a subset of recipients flagged as potential fraud risks. Investigators reviewed those identified and confirmed that the filter (1) identified all open fraud ring cases and all known participants within those cases for each school, (2) identified new potential fraud rings, and (3) added additional suspects to fraud rings the OIG already was investigating. To affirm the validity of this model, we performed a further study on four additional schools, and the results were identical to the 14 schools.

We presented an overview of our methodology and some initial results to FSA representatives on February 10, 2012. This management information report presents the final results of this aspect of our project. We will also provide a description of the details of our model and statistical validation methodologies to FSA and OPE officials.

Process to Quantify Funds Lost to Fraud Rings

We developed a separate statistical model to confirm and quantify the estimated student aid dollars associated with the fraud we had identified in our school-based model. We constructed a recipient-level data set combining Free Application for Federal Student Aid reported data, supplemental demographic data, Pell grant and loan history, and other data sources. Pairing this information with known fraud cases in the 14 schools described above, we constructed a predictive statistical model that estimated a recipient's probability of participating in a school-based student aid fraud ring. We evaluated the accuracy of the model's predictions using a measure called a concordance rate, which is a measure that compares the model predictions to the known behavior. We found our statistical model predicted the presence or absence of fraud with a high degree of accuracy, as measured by a concordance rate of 92.9 percent. The model created the resulting mathematical equation that allowed us to calculate a recipient's estimated probability of participating in a school-based student aid fraud ring given his or her personal-level data.

While we found the statistical model's accuracy to the training data (data derived from the 14 selected schools) to be acceptable, we had concerns with the model's applicability to the general population. Because these 14 schools were subjectively identified by our investigators, we wanted to test the model before applying it to the national recipient population. Consequently, we performed two validation checks.

First, a school that was identified with fraud ring cases but was excluded from the original model-building was now used to test the model predictions. This school had a much larger recipient population and a lower known incidence of fraud than the other schools. We used the model to score the school's recipients and found that the estimated probability of school-based fraud corresponded with the actual known incidence of fraud. The second approach used a resampling technique referred to as a "jack-knife" procedure, which reconstructed the model

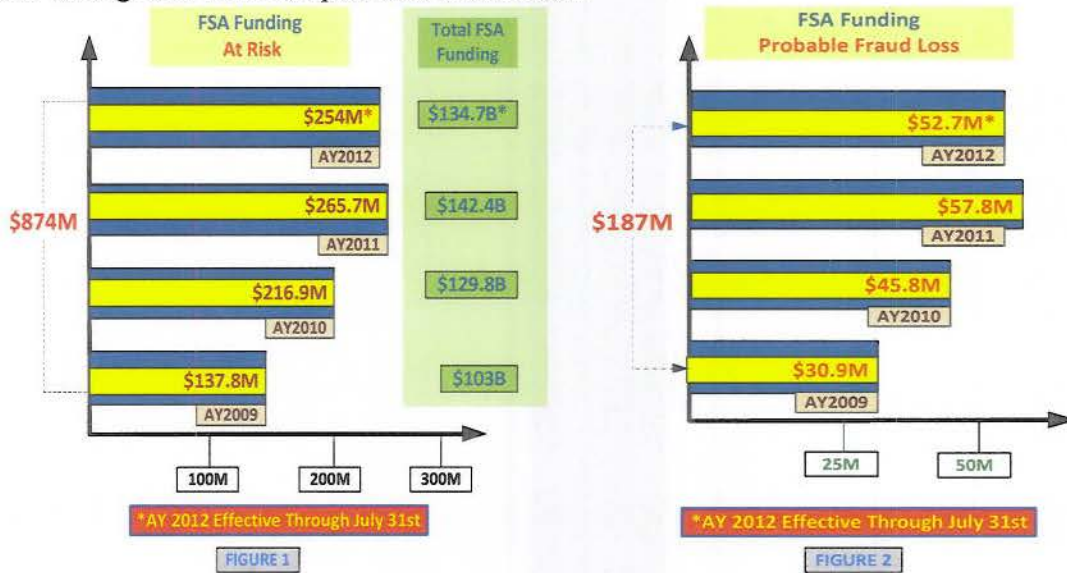
⁵ Initially, we were supplied with 15 school locations, but one school had a very low count of applicants that were flagged by our rule-based filter, which would indicate a low probability of fraud ring activity and, therefore, was dropped from the study.

using random subsets of the schools and recipients. We estimated probabilities of school-based fraud ring activity and dollars associated with that fraud ring activity using over 1,000 different subsets. This approach resulted in a wider range of estimated fraud dollars where 90 percent of the repetitions did not alter the dollar amount estimate by more than +/- 7 percent. We have concluded that both of these additional tests have validated the results of our school-based model.

Results of OIG Analysis of Risk Relating to School-based Fraud Ring Activity

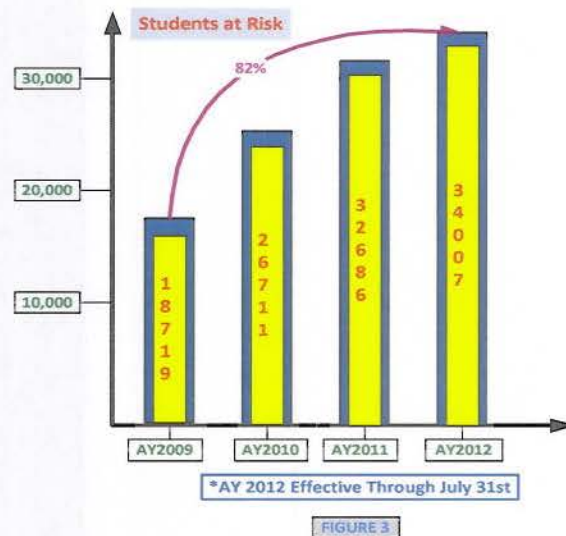
Based upon the success of the validated rules-based filter in identifying fraudulent or suspicious activities, we then incorporated the filter into the school-based student aid fraud ring model. When we applied the filter to all students receiving Title IV disbursements between AY 2009 to AY 2012,⁶ it identified 85,000⁷ recipients that may have participated in school-based fraud ring activity. As depicted in FIGURE 1 below, these 85,000 recipients received a total of \$874 million of the \$509.9 billion of Title IV aid that was distributed AY 2009 through AY 2012. While our school-based model identified \$874 million in awards at risk, we could not state with assurance which of these recipients' Title IV dollars were actually associated with a school-based fraud ring and, therefore, would be a probable fraud loss.

Consequently, we used the statistical model discussed in the previous section to estimate each of these at-risk recipients' probability of fraud based on his or her personal data. We then multiplied the total student aid received by each recipient by their estimated fraud probability to estimate the total fraud Title IV dollars obtained by that recipient. Based on this analysis, we estimated as depicted in FIGURE 2 below that \$187 million of Title IV funds for the period AY 2009 through AY 2012 are probable fraud losses.⁸



⁶ Award Year Period – Though an award year covers a July-to-June time period, the actual processing time duration for all related funding documentation and associated modifications ends on December 31st of the award year.
⁷ The 85,000 student count represents a one-time count of students and negates double counting of those students (as reflected in the graph) with grants or loans awarded in more than one year between AY 2009 thru AY 2012.
⁸ Using the 95 percent confidence level for each student's estimated fraud probability, the model estimate ranged from -11 percent below to + 13 percent above the \$187 million.

As shown in FIGURE 3, our school-based model determined that 18,719 recipients were considered at risk in AY 2009. This population increased to 34,007 by AY 2012. This increase of 82 percent indicates that school-based fraud ring activity is a growing problem.



Suggestions

OIG's IPAR recommended the establishment of application edits in both the Central Processing and the National Student Loan Data Systems to flag potential fraud ring participants, as well as to identify practices for institutions to detect and prevent distance education fraud. In its response to the previous report, the Department of Education (Department) acknowledged the need to reassess the aid application and delivery system controls. The Department also stated that it recognized an opportunity to develop continuing and more comprehensive measures to minimize the potential for fraud.

As a continuation of these efforts, we suggest that the Department consider incorporating the fraud detection processes referenced in this report into FSA processes.

Objective, Scope, and Methodology

The objective of this project was to develop a model that successfully detects with a high degree of probability school-based student aid fraud ring activity, within the Federal student aid arena. We selected AY 2010 as the most recently completed school year to conduct this assessment and identified 15⁹ schools with suspected fraudulent activity as the area of focus.

The project team (1) identified potential fraud indicators based on experience and subject matter expertise; (2) assessed the accumulated indicators in terms of how best to logically separate, converge, and display student versus school anomalies; (3) captured an end-of-year snapshot of all of the related data points from the related Department systems for each of the risk indicators; (4) assessed whether the results met initial expectations (that is, did the data say what we expected it to say using known high-risk entities for reasonableness testing within the identified

⁹ See footnote 5.

high-risk pool); and (5) analyzed the model and finalized it by adding, deleting, and modifying original fraud indicators, to include appropriate weighting if needed.

We conducted our work in accordance with the OIG quality standards for a Management Information Report.

Department Response

A draft of this report was provided to FSA and OPE on November 20, 2012. FSA and OPE reviewed the draft report and provided OIG with a formal, written response on January 11, 2013. We are including that response as an attachment to this report.



UNITED STATES DEPARTMENT OF EDUCATION

WASHINGTON, D.C. 20006- _____

MEMORANDUM

DATE: January 11, 2013

TO: Charles E. Coe, Jr.
Assistant Inspector General
Information Technology Audits and Computer Crime Investigations
Office of Inspector General

FROM: James W. Runcie
Chief Operating Officer
Federal Student Aid
James W. Runcie

David A. Bergeron
Acting Assistant Secretary
Office of Postsecondary Education
David A. Bergeron

SUBJECT: Draft Management Information Report
Student Aid Fraud Ring Assessment
Control No. ED-OIG/X18M0001

Thank you for providing us with an opportunity to respond to the Office of Inspector General's (OIG) draft Management Information Report entitled, "Student Aid Fraud Ring Assessment" (Control Number ED-OIG/X18M0001). The draft report provided Federal Student Aid (FSA) and the Office of Postsecondary Education (OPE) with the results of your risk analysis regarding one type of student aid fraud ring activity associated with the electronic processing of Federal student aid applications, expanded on the OIG's Investigative Program Advisory Report (IPAR), "Distance Education Fraud Rings," issued in the fall of 2011, and discussed the magnitude of probable fraud losses. We share your concerns about the potential growth of fraud in the student aid programs, and we continue to work aggressively to analyze, identify and establish plans to implement a series of new policies, controls and processes to combat this problem.

As an initial matter, describing the type of fraud that you have identified as "school-based" is somewhat misleading and could cause confusion with readers who are not familiar with the analyses you have conducted. Specifically, the analysis is "school-based" because you have looked to identify instances where there were individuals that share certain common characteristics at the same institution. The description of the fraud as "school-based" is likely to result in some readers believing that the institution has played some role in the fraud itself rather

than seeing it simply as a description of how the analysis was performed. For this reason, we believe the draft report should not use "school-based" as a descriptor of the fraud.

Upcoming Regulatory Activities

As part of our response and corrective actions taken in response to the OIG IPAR, on May 1, 2012, we published a notice in the Federal Register announcing our intention to establish a negotiated rulemaking committee to prepare proposed regulations for the Federal student aid programs authorized under Title IV of the Higher Education Act of 1965, as amended (HEA). In that notice, we referenced the OIG IPAR and indicated that we were interested in suggestions for regulatory changes to further help institutions combat fraud and protect students and taxpayers from fraudulent activity. We held two public hearings in May 2012 in Phoenix, Arizona and Washington, D.C. and also solicited written comments from the public. A number of external parties submitted comments during this process that should be helpful as we proceed. Combating fraud continues to be a major component of our regulatory agenda, and we are hoping to move forward with the regulatory process in early 2013.

We have also reviewed existing regulations to identify where mechanisms for preventing distance education fraud and obtaining repayment of fraudulently received aid could be added or made tighter, and have also investigated whether it would be helpful to limit the method by which schools release federal student aid credit balances to only the use of electronic fund transfers to student bank accounts. The regulatory solutions ultimately adopted must be developed through the negotiated rulemaking process.

Procedures for Enforcement

As recommended by the OIG in Finding 7 of its IPAR, we have put in place procedures to assess repayment liabilities against individuals whom the Department determines to have fraudulently applied for and obtained Title IV funds. Under these procedures, the perpetrators are subjected to collection and "flagged" as ineligible for further aid until repayment in full has been received. Likewise, as recommended in Finding 9 of the IPAR, we have established procedures by which individuals who enter into pretrial diversions are required to repay the Department and are flagged as "ineligible" pending repayment.

Additional Verification Selection Criteria and Documentation Requirements

The Program Integrity regulations, published on October 29, 2010, contained significant modifications to the verification regulations to allow the Secretary to specify annually the items that an applicant and an institution may be required to verify each year and the acceptable documentation for those items. The Department's long-range goal for verification is to develop a highly customized selection and verification process that targets applicants for review based on the data provided by each applicant on the FAFSA. This process will identify, for a selected applicant, only the FAFSA information that requires verification based upon that applicant's data. As a step toward this long-term goal, we published a Federal Register notice on July 12,

2012 that specified the verification items for the 2013-2014 award year. This notice included two additional items that were recommended in the OIG IPAR:

1. High School completion status; and
2. Proof of identity/Statement of Educational Purpose.

Beginning with the 2013-2014 FAFSA application cycle, the verification selection process has been enhanced to identify and select applicants who, based on a statistical risk model, might be attempting to obtain Title IV student aid funds either fraudulently or without serious educational intent. It is important to note that even under this statistical selection process, it is possible that selected applicants are serious financial aid applicants. This is especially true for this first year where analytic data used for selection is limited.

As announced in Dear Colleague Letter GEN-12-11, there will be five Verification Tracking Groups for 2013–2014. The items that an institution must verify are based upon the Verification Tracking Group to which the applicant is assigned. Applicants who meet the possible fraud risk model will be assigned to either Verification Tracking Group IV or V. Both of these Verification Tracking Groups will require the applicant to provide documentation of their high school completion status. Applicants selected for these groups also will be required to present themselves in person to the institutional financial aid office with a government issued photo ID. These applicants must execute, in front of the institutional representative, a Statement of Educational Purpose. The Dear Colleague Letter provides an alternative for applicants who are unable to appear in person at the institution that allows them to meet the proof of identity requirement by executing the Statement of Educational Purpose in person before a notary public.

Requiring these selected applicants to appear in person (either at the institution or in front of a notary public) should address instances where applicants were using other persons' identifiers to apply for student aid as well as for admission and registration at the institution. Requiring these applicants to execute a new Statement of Educational Purpose adds evidence for enforcement (including repayment of aid and/or prosecution) if the applicant fails to fully participate in the educational program for which the aid was provided.

Through this process, we expect to address at least some of the fraud that would otherwise have occurred while we monitor whether these measures have unintended consequences such as whether they deter applications from legitimate students.

Enhanced Scrutiny of Applicants with Unusual Enrollment History

Beginning with the 2013-2014 FAFSA application cycle, applicants who appear to have an unusual enrollment history will have their records "flagged" to require the institution to determine if the student's prior academic record supports a serious academic intent. Specifically, applicants who received Pell Grant funding from multiple institutions over a period of time will be selected for this increased scrutiny. An example might be an applicant who received Pell Grant funds for attendance at multiple institutions in the same award year would be flagged. Because there could be legitimate reasons such an applicant had multiple enrollments over a

relatively short period of time, the guidance we will provide to institutions will be to analyze academic records and/or documentation from the applicant before making a determination of the applicant's continued eligibility.

Analysis of Multiple Email Addresses and Multiple IP Addresses

Beginning with the 2013-2014 FAFSA application cycle, FSA will collect email addresses and IP address information when applicants apply electronically using FAFSA on the Web (FOTW). FSA will analyze these data, both individually and combined, (1) to determine if there are instances that raise the possibility of fraud, and (2) to establish an enhanced risk model that would be used to select applicants for increased verification or other scrutiny.

Probable Fraud Loss

In your report you estimate \$187 million in probable fraud loss. We would greatly appreciate the opportunity to review the list of individuals who contribute to this total so that, in coordination with our on-going efforts to bolster our analytical procedures and preventative controls, we may take more immediate action to research and resolve these specific risks for these specific individuals. If, ultimately, we determine that these individuals were engaged in fraud, we will take steps to collect the funds improperly disbursed as required by the Office of Management and Budget when improper payments have been made.

We appreciate the work that the OIG has conducted in this area and we look forward to continuing to work together to address this important issue. We would like to have a continuing dialogue about further expeditious actions that can be taken to enhance this effort. It would be particularly helpful to us if the OIG would repeat the analysis used for the draft report once the 2013-14 award year is underway. This would give us an early indication about the effectiveness of the new selection and verification process. If you have any significant concerns or questions about our comments and planned actions, please let us know, and we would be glad to further discuss these matters with you.

Thank you again for the opportunity to comment on your draft Management Information Report.