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# **Enterprise Fraud, Waste and Abuse Prevention and Detection:**

## Annual Report to the Legislature



**OFFICE OF THE NEW YORK STATE COMPTROLLER**

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## Introduction

Data analytics involves collecting, organizing and analyzing large sets of data. It can be used for many purposes. At the Office of the State Comptroller (OSC), it holds potential for building on the agency's record of detecting and preventing fraud, waste and abuse in State government contracting and spending.

Chapter 566 of the Laws of 2015, codified as State Finance Law § 8-c, the Enterprise Fraud, Waste and Abuse Prevention and Detection Act (Act) calls for the establishment of a statewide electronic system to help detect and prevent fraud, waste, and abuse in government spending and the improper payment of public moneys. The Act affirms the State Comptroller's role in protecting the public's money, and requires cooperation by all State agencies and State public authorities in this effort.

State Finance Law § 8-c requires the State Comptroller to report to the Legislature by September 1st of each year on the progress, status and results of the electronic fraud prevention and detection system. This is the second such annual report.

## The Enterprise Fraud, Waste and Abuse Prevention and Detection Act

The Act authorizes the establishment and implementation by the State Comptroller of an electronic data analytical enterprise fraud prevention and detection system. State agencies, State public authorities and other State entities are directed to fully support and cooperate with the Comptroller, by providing the Comptroller with access to data for use in the new system in accordance with applicable State and federal law.

The Act specifies that the State Comptroller may:

- Develop a long-range plan for preventing or detecting improper payments of public moneys and other forms of fraud, waste and abuse in government operations.
- Acquire technology to enhance automated detection and alerting; continuously monitor program transactions and activity; and detect fraud and improper payments such as program eligibility and identity theft.
- Evaluate potential savings resulting from such efforts.

The Act also recognizes the importance of protecting private information and maintaining secure access. All data received is classified, maintained and stored according to OSC Information Security Office policies and standards. These security protocols are consistent with State and federal cybersecurity standards and are made available to data-sharing entities.

## Building the Foundation

The design and construction of an Analytics Data Warehouse is well underway—providing a secure data environment using established security guidelines. Data sets from the Statewide Financial System, including voucher payments, voucher accounting information, and procurement, travel, and fuel credit card data have been copied into the Warehouse.

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Publicly available data for not-for-profit (NFP) entities and Minority- and Women-Owned Business Enterprises has also been incorporated into the Analytics Data Warehouse. This information will help OSC better monitor contract administration and speed vendor responsibility reviews.

Use of visualization, business intelligence, and statistical analysis tools is steadily expanding as the Analytics Data Warehouse matures. These tools enable auditing of larger volumes of data sets and improve productivity of daily audit work. OSC has developed extensive training to support its auditors in the use of these tools.

As envisioned by the Act, OSC has already begun collaborating with agencies to obtain data and to share analytic approaches and potential indications of fraud, waste and abuse. An important component of this work is the opportunity to improve data quality statewide. OSC is also evaluating the impact of federal Executive Order 13556, the Controlled Unclassified Information directive that establishes a program to standardize the classification of data from all federal agencies.

## **Progress, Status, and Results**

The Office of the State Comptroller has made progress in several areas towards identifying and applying data analytics to enhance efforts to identify and prevent fraud, waste and abuse. Examples from the past year follow:

### **Contract Reviews**

OSC reviews and approves most contracts for State agencies as well as certain contracts for State public authorities. OSC identified a proposed contract with a specific risk profile and determined that the pricing appeared to be high. A model was developed enabling staff to identify historical invoices and payment data for comparable services. OSC shared this information with the contracting agency and significantly enhanced its negotiating position. The contracting agency was able to negotiate a reduction in the proposed contract amount of approximately \$4.96 million.

OSC also developed a model to evaluate historical payment and invoice data and predict future payments under an elevator maintenance contract where the contract value appeared excessive. By using this technique, OSC was able to reduce the maximum value of the contract, producing anticipated savings of \$11.5 million over five years.

### **Expenditure Audits**

OSC is responsible for meeting constitutional and statutory requirements to audit all State vouchers before payment. New analysis techniques that create graphical representations of large data sets were used to stop payment on 137 vouchers totaling \$3.4 million, where an agency had circumvented procurement rules that are designed to protect taxpayers and ensure fairness in contracting. In addition, OSC stopped payment on 110 vouchers totaling \$4 million that failed to reference the associated contract. Preventing such payments ensures that agencies do not spend above contract limits and accurately report contract spending.

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Using statistical methods, OSC was able to quickly analyze more than one million credit card charges for the purchase of goods and services. Auditors identified \$37 million in 319 aggregate purchases greater than \$50,000 that appeared to circumvent New York’s procurement laws. OSC will follow up to ensure agencies facilitated competition and ensured reasonable prices in the purchasing process.

## **Focusing on Riskier Transactions**

One of the major benefits of utilizing data analytic techniques is that they help improve the likelihood that staff resources are allocated to the riskiest transactions. For example, OSC identified several fields on the IRS Form 990 that is submitted by not-for-profit (NFP) entities that might indicate a higher level of risk in State contracting with NFPs. Using new analytic methods, OSC can now quickly scan thousands of 990 forms and focus resources on the areas of higher risk. This is not only more efficient for OSC, but can also help speed contract processing times for NFPs.

## **Spending Analytics**

The development and expansion of the Analytics Data Warehouse and the use of business intelligence and visualization tools are allowing OSC to better aggregate and evaluate statewide spending with individual vendors. This information provides agencies with access to comparative pricing and helps them get better value during contract negotiations. It will also allow OSC to more quickly identify agencies engaging in “split-ordering” (intentionally dividing a purchase order so that amounts fall below certain contracting thresholds) and those that are over-spending on contracts and avoiding the need to rebid (which impacts other vendors that wish to compete for the State’s business).

## **Faster Analysis of Large Data Sets**

Effective use of data analytics increases productivity by permitting faster analysis of audit hypotheses. For example, OSC auditors set out to test a contention made in a U.S. General Accountability Office white paper that simple data entry errors such as inserting an invoice number into the invoice amount field constituted a major potential area of financial loss.<sup>1</sup> An analytics method was applied to five years of Statewide Financial System data, and the team was able to quickly identify errors that could easily be halted in the future using an automated process.

OSC also used data matching to assess health care data to identify inappropriate payments on behalf of deceased or incarcerated individuals. Data analysis techniques enabled OSC to quickly match over 17 million records valued at \$1.4 billion in payments, which resulted in no significant findings and allowed for better use of examiner time.

In another instance OSC analyzed five years of payments (representing 35 million records) associated with 156 centralized contracts that included early payment discount terms. Analysts found that virtually no discounts had been taken, either because the payment was made too late or the voucher had been miscoded to negate the early payment discount. Effective use of data analytics to quickly evaluate a high volume of information enabled OSC to identify opportunities for future savings, and OSC will be preparing guidance for agencies to capture savings opportunities going forward.

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<sup>1</sup> “Data Analytics to Address Fraud and Improper Payments,” highlights of a forum convened by the Comptroller General of the United States, March 2017, GAO-17-339SP <http://www.gao.gov/assets/690/683859.pdf>.

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Finally, OSC also analyzed more than 7.5 million vouchers for the five years ending March 31, 2017 and found that approximately 5.6 million vouchers were paid before the statutory due date, resulting in an estimated \$3.5 million in lost short-term interest earnings for the State. This ability to rapidly review payment data will inform future decisions on payment policies that benefit taxpayers.

## **Personal Income Tax Refunds and Property Tax Freeze Credit Payments**

During 2016, OSC audited more than 9.7 million Personal Income Tax (PIT) refunds and property tax freeze credit payments totaling almost \$10.2 billion. As a result, OSC returned the following questionable payments to the Department of Taxation and Finance (DTF) for follow-up evaluation: 12,335 PIT refunds totaling \$43.9 million; and 170,246 property tax freeze credit payments totaling nearly \$42.2 million.

In addition, OSC analyzed all 2015 PIT returns—not only those with refunds—to identify improperly claimed New York State and New York City Child and Dependent Care Credits for costs that may already have been subsidized by State and City assistance programs. From the 7.5 million PIT returns processed in 2015, OSC found 29,100 returns that contained potentially inappropriate credits valued at \$18.3 million. OSC and DTF will continue to work to improve PIT return auditing.

## **Unemployment Insurance (UI) Overpayments**

In cooperation with the Department of Labor (DOL), OSC identified 6,457 overpayments totaling over \$2.2 million that resulted in DOL-assessed penalties of over \$307,000 to 216 claimants. Additionally, OSC identified potential recoveries of almost \$239,000 from 130 New York State employees hired during 2016 who owed DOL for Unemployment Insurance (UI) overpayments received in prior years.

## **Workers' Compensation Board Medical and Compensation Payments**

The Workers' Compensation Board makes payments to: (i) cover employees when employers have insufficient insurance; (ii) cover claimants who become disabled while collecting unemployment insurance; or (iii) relieve carriers or self-insured employers from expenses associated with long-term disability. OSC identified more than \$1.2 million in payments that did not comply with mandated fee schedules or had other errors. OSC also halted two 'outlier' claims totaling \$2.6 million due to data entry errors.

## **Next Steps**

Since the Act became law, OSC has been creating the foundation on which to build the State's new electronic enterprise data analytic system. This work includes determining the staff and technology needs to maximize the value of the initiative. OSC is engaged in an ongoing review of data analytic options, evaluating business needs and potential return on investment.

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Initial efforts have been focused on identifying data available from various sources, including information maintained by the State Comptroller in the Statewide Financial System as well as data publicly accessible on the Internet and from State agencies. Work is underway to structure and combine data and provide access to related information about contracts and payments to help examiners identify unusual trends that may signal an improper use of State resources.

Creating a highly skilled workforce through training and development is one of the best investments New York can make to improve fraud prevention and detection. OSC will continue to develop its data analytics training and, where possible, draw on such training to facilitate the payment review processes, utilizing tools that can refine risk assessment, data filtering, the management of payment flows, and the use of automation.

Going forward, OSC will continue to work with State agencies and State public authorities to identify business processes and systems that could be modified to improve fraud, waste and abuse detection and prevention of improper payments before they are made. Some of the key elements of this effort may include: gaining near real-time access to more information; creating models and processes that can automate and streamline data analyses; and establishing additional controls in payment systems. In addition, the Act contemplates a coordinated approach with agencies, and OSC recognizes the value that agency partners bring to the table in creating an enterprise-wide analytic culture.

## Conclusion

The Office of the State Comptroller will continue building on its efforts to use data analytics to streamline and improve its auditing and oversight capabilities. Initial results—including development of the Analytics Data Warehouse, investment in more sophisticated tools and methods, and staff training—have already demonstrated the value of data analytics in gaining efficiencies during daily payment and other audit activities, and for evaluating large amounts of data to better focus audit resources.

Looking forward, benefits will be provided to New York's taxpayers, non-profits and businesses as data analytics enhances the detection and prevention of fraud, waste and abuse—with the potential to reduce the cost of delivering services and create a fair and level playing field for those entities doing business with New York State.

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Prepared by the Data Analytics Bureau



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