

July 2018

DATA ACT

Reported Quality of Agencies' Spending Data Reviewed by OIGs Varied Because of Government-wide and Agency Issues DATA ACT

Reported Quality of Agencies' Spending Data Reviewed by OIGs Varied Because of Governmentwide and Agency Issues

Highlights of GAO-18-546, a report to congressional addressees

Highlights

GAO

Why GAO Did This Study

The DATA Act was enacted to increase accountability and transparency and, among other things, expanded on the required federal spending information that agencies are to submit to Treasury for posting to a publicly available website. The act also includes provisions requiring a series of oversight reports by agencies' OIGs and GAO.

The objectives of this report are to describe (1) the reported scope of work covered and type of audit standards OIGs used in their reviews of agencies' DATA Act spending data; (2) any variations in the reported implementation and use of data standards and quality of agencies' data, and any common issues and recommendations reported by the OIGs; and (3) the actions, if any, OMB and Treasury have reported taking or planning to take to use the results of OIG reviews to help monitor agencies' implementation of the act.

To address these objectives, GAO reviewed 53 OIG reports issued on or before January 31, 2018, that assessed agencies' first submissions of spending data for the second quarter of fiscal year 2017 and surveyed the OIGs to obtain additional information.

What GAO Recommends

GAO is not making recommendations in this report. The Council of the Inspectors General on Integrity and Efficiency (CIGIE) noted that GAO's report provides useful information on OIG efforts to meet oversight and reporting responsibilities under the DATA Act. OMB, Treasury, and CIGIE also provided technical comments that GAO incorporated as appropriate.

View GAO-18-546. For more information, contact Paula M. Rascona at (202) 512-9816 or rasconap@gao.gov.

What GAO Found

The Digital Accountability and Transparency Act of 2014 (DATA Act) requires agencies' Offices of Inspector General (OIG) to issue reports on their assessments of the quality of the agencies' spending data submissions and compliance with the DATA Act. The scope of all OIG reviews covered their agencies' second quarter fiscal year 2017 submissions. The files the OIGs used to select and review sample transactions varied based on data availability, and OIGs performed different types of reviews under generally accepted government auditing standards. Some OIGs reported testing a statistical sample of transactions that their agencies submitted and other OIGs reported testing the full population of submitted transactions. Because of these variations, the overall error rates reported by the OIGs are not fully comparable and a government-wide error rate cannot be projected.

According to the OIG reports, about half of the agencies met Office of Management and Budget (OMB) and Department of the Treasury (Treasury) requirements for the implementation and use of data standards. The OIGs also reported that most agencies' first data submissions were not complete, timely, accurate, or of quality.

Completeness, Timeliness, Accuracy, and Quality of Agency Data Reported by Offices of Inspector General

24 CFO Act agencies		29 r	non-CFO Act agencies
6 of 24	OIGs found agency data to b complete, timely, accurate, o		9 of 29
18 of 24	OIGs did not find agency o complete, timely, accurate, o		20 of 29

CFO Act - Chief Financial Officers Act of 1990

Source: GAO analysis of Office of Inspector General reports. | GAO-18-546

OIG survey responses show that OIGs generally reported higher (projected) overall error rates for the accuracy of data than for completeness and timeliness. OIGs reported certain errors that involve inconsistencies in how the Treasury broker (system that collects and validates agency-submitted data) extracted data from certain federal award systems that resulted in government-wide issues outside the agencies' control, while other errors may have been caused by agency-specific control deficiencies. For example, OIGs reported deficiencies related to agencies' lack of effective procedures or controls and systems issues. Most OIGs made recommendations to agencies to address identified concerns.

OMB staff and Treasury officials told GAO that they reviewed the OIG reports to better understand issues identified by the OIGs. OMB issued new guidance in June 2018 requiring agencies to develop data quality plans intended to achieve the objectives of the DATA Act. Treasury officials told GAO that they are collaborating with OMB and the Chief Financial Officers Council DATA Act Audit Collaboration working group to identify and resolve government-wide issues.

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Abbreviations

ASP CFO CFO Act CIGIE	Award Submission Portal Chief Financial Officer Chief Financial Officers Act of 1990 Council of the Inspectors General on Integrity and Efficiency
DAIMS	DATA Act Information Model Schema
DATA Act	Digital Accountability and Transparency Act of 2014
FABS	Financial Assistance Broker Submission
FAEC	Federal Audit Executive Council
FFATA	Federal Funding Accountability and Transparency Act of 2006
FPDS-NG	Federal Procurement Data System-Next Generation
FSRS	FFATA Subaward Reporting System
GAGAS	generally accepted government auditing standards
GTAS	Government-wide Treasury Account Symbol Adjusted Trial Balance System
IG Guide	Inspectors General Guide to Compliance Under the DATA Act
OIG	Office of Inspector General
OMB	Office of Management and Budget
SAM	System for Award Management
TIGTA	Treasury Inspector General for Tax Administration
Treasury	Department of the Treasury
-	

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U.S. GOVERNMENT ACCOUNTABILITY OFFICE

441 G St. N.W. Washington, DC 20548

July 23, 2018

Congressional Addressees

The Digital Accountability and Transparency Act of 2014 (DATA Act) was enacted, in part, to increase accountability and transparency of federal spending, which totaled almost \$4 trillion for fiscal year 2017.¹ Among other things, the DATA Act includes provisions requiring a series of Office of Inspector General (OIG) and GAO oversight reports evaluating the completeness, timeliness, quality, and accuracy of federal agencies' spending data and the implementation and use of data standards.² The act also requires the Office of Management and Budget (OMB) and Department of the Treasury (Treasury) to establish data standards to generate uniform agency data that are consistent and comparable.

In accordance with the DATA Act and OMB and Treasury guidance, federal agencies submitted their first round of spending data in May 2017 for the second quarter of fiscal year 2017, and the OIGs issued their first mandated data quality oversight reports beginning in October 2017.³ This report is part of our ongoing monitoring of DATA Act implementation in response to provisions in the DATA Act that call for us to review OIG reports and issue reports assessing and comparing the quality of agency data submitted under the act and agencies' implementation and use of data standards.

The objectives of this report are to describe (1) the reported scope of work covered and type of audit standards OIGs used in their reviews of agencies' DATA Act spending data; (2) any variations in the reported implementation and use of data standards and quality of agencies' data, and any common issues and recommendations reported by the OIGs;

¹Pub. L. No. 113-101, 128 Stat. 1146 (May 9, 2014). The DATA Act amended the Federal Funding Accountability and Transparency Act of 2006 (FFATA). Pub. L. No. 109-282, 120 Stat. 1186 (Sept. 26, 2006), *codified at* 31 U.S.C. § 6101 note. We refer to language added to FFATA by the DATA Act as DATA Act requirements.

²The DATA Act defines "federal agency" by reference to the definition of "executive agency" set out in section 105 of Title 5, United States Code.

³Some OIGs contracted out the performance of these mandated reviews to independent public accountants. For purposes of this report, we refer to the reviews conducted by the OIGs and their contractors and the resulting reports collectively as OIG reviews or reports, unless otherwise noted.

and (3) the actions, if any, that OMB and Treasury have reported taking or planning to take to use the results of OIG DATA Act reviews to help monitor agencies' implementation of the act.

To address these objectives, we obtained and reviewed 53 OIG DATA Act reports⁴ that were issued on or before January 31, 2018, from 24 Chief Financial Officers Act of 1990 (CFO Act) agency OIGs and 29 non-CFO Act agency OIGs.⁵ We identified the OIGs' reported (1) scope of work and type of audit standards OIGs used in their reviews. (2) conclusions about agencies' implementation and use of the data standards and the quality of the agencies' data, (3) government-wide and agency-specific issues identified, and (4) recommendations to address identified deficiencies.⁶ We also surveyed OIGs to obtain additional information regarding error rates, sample sizes, control deficiencies identified, and other items associated with the reviews they conducted. We received and reviewed responses from the 53 OIGs that we obtained reports from and followed up with OIGs for clarification and corroboration, as necessary. Finally, we interviewed OMB staff and Treasury officials to determine how they used or plan to use the results of the OIG reviews in monitoring agencies' implementation of the DATA Act. Appendix I provides additional details on our scope and methodology.

We conducted this performance audit from September 2017 to July 2018 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 our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

⁵The CFO Act, Pub. L. No. 101-576, 104 Stat. 2838 (Nov. 15, 1990), among other things, established Chief Financial Officer positions at major federal entities. The current list of 24 included entities, commonly referred to as CFO Act agencies, is codified at section 901 of title 31, United States Code.

⁶For the purposes of this report and our survey, we defined data quality as encompassing the concepts of timeliness, completeness, and accuracy so the assessment of overall data quality is reflected in the specific assessments of these components.

⁴DATA Act reports were issued by 55 OIGs by January 31, 2018, including reports from Treasury's OIG, the Treasury Inspector General for Tax Administration (TIGTA), and GAO's OIG. Treasury's OIG and TIGTA performed separate audits and issued separate reports, in addition to Treasury OIG issuing a combined report. We used the Treasury OIG and TIGTA combined report for this review. We did not include the GAO OIG report in our review for independence reasons.

Background	The DATA Act was enacted May 9, 2014, for purposes that include expanding on previous federal transparency legislation by requiring the disclosure of federal agency expenditures and linking agency spending information to federal program activities, so that both policymakers and the public can more effectively track federal spending. The act also calls for improving the quality of data submitted to USAspending.gov by holding federal agencies accountable for the completeness and accuracy of the data submitted. The Federal Funding Accountability and Transparency Act of 2006 (FFATA), as amended by the DATA Act, identifies OMB and Treasury as the two agencies responsible for leading government-wide implementation. For example, the DATA Act requires OMB and Treasury to establish government-wide financial data standards that shall, to the extent reasonable and practicable, provide consistent, reliable, and searchable spending data for any federal funds made available to or expended by federal agencies. These standards specify the data elements to be reported under the DATA Act and define and describe what is to be included in each data element, with the aim of ensuring that information will be consistent and comparable. The DATA Act also requires OMB and Treasury to ensure that the standards are applied to the data made available on USAspending.gov.
Sources of Data on USAspending.gov	USAspending.gov has many sources of data. For example, agencies submit data from their financial management systems, and other data are extracted from government-wide federal financial award reporting systems populated by federal agencies and external award recipients. A key component of the reporting framework is Treasury's DATA Act broker (broker)—a system that collects and validates agency-submitted data to create linkages between the financial and award data prior to their publication on the USAspending.gov website. ⁷

⁷Prior to March 2, 2018, agency data were published on Beta.USAspending.gov, a beta version of the new USAspending.gov website.

According to Treasury guidance documents, agencies are expected to submit three data files with specific details and data elements to the broker from their financial management systems.⁸

- File A: Appropriations account. This includes summary information such as the fiscal year cumulative federal appropriations account balances and includes data elements such as the agency identifier, main account code, budget authority appropriated amount, gross outlay amount, and unobligated balance.
- File B: Object class and program activity. This includes summary data such as the names of specific activities or projects as listed in the program and financing schedules of the annual budget of the U.S. government.
- File C: Award financial. This includes award transaction data such as the obligation amounts for each federal financial award made or modified during the reporting quarter (e.g., January 1, 2017, through March 31, 2017).

The broker also extracts spending information from government-wide award reporting systems that supply award data (e.g., federal grants, loans, and contracts) to USAspending.gov. These systems—including the Federal Procurement Data System-Next Generation (FPDS-NG), System for Award Management (SAM), Financial Assistance Broker Submission (FABS), and the FFATA Subaward Reporting System (FSRS)—compile information that agencies and external federal award recipients submit to report, among other things, procurement and financial assistance award

⁸Treasury guidance includes the initial DATA Act Information Model Schema (DAIMS), which provided information on how to standardize the way financial assistance awards, contracts, and other financial and nonfinancial data were to be reported under FFATA, as amended by the DATA Act. In June 2017, Treasury released DAIMS version 1.1, a minor update to facilitate the transition of financial assistance reporting from the Award Submission Portal (ASP) to the Financial Assistance Broker Submission, and to improve alignment of data elements and standards to data sources, such as the Federal Procurement Data System-Next Generation.

information required under FFATA.⁹ The four files produced with information extracted by the broker from the four systems are as follows:

- File D1: Procurement. This includes award and awardee attribute information (extracted from FPDS-NG) on procurement (contract) awards and contains elements such as the total dollars obligated, current total value of award, potential total value of award, period of performance start date, and other information to identify the procurement award.
- File D2: Financial assistance. This includes award and awardee attribute information (extracted from FABS) on financial assistance awards and contains elements such as the federal award identification number, the total funding amount, the amount of principal to be repaid for the direct loan or loan guarantee, the funding agency name, and other information to identify the financial assistance award.
- File E: Additional awardee attributes. This includes additional information (extracted from SAM) on the award recipients and contains elements such as the awardee or recipient unique identifier; the awardee or recipient legal entity name; and information on the award recipient's five most highly compensated officers, managing partners, or other employees in management positions.
- File F: Subaward attributes. This includes information (extracted from FSRS) on awards made to subrecipients under a prime award and contains elements such as the subaward number, the subcontract award amount, total funding amount, the award description, and other information to facilitate the tracking of subawards.

The key components of the broker and how the broker operated when the agencies submitted their data for the second quarter fiscal year 2017 are shown in figure 1.

⁹The information displayed on USAspending.gov is derived from several sources. Procurement data are imported from FPDS-NG, which collects information on contract actions. SAM is the primary database for information on potential government business partners into which those wishing to do business with the federal government must register. ASP was the platform used by federal agencies to report financial assistance data until Treasury replaced it in September 2017 with FABS. FSRS provides data on firsttier subawards that prime recipients report.





Source: GAO analysis of Department of the Treasury (Treasury) technical documents. | GAO-18-546

Note: The Treasury broker is a system that collects and validates agency-submitted data to create linkages between the financial and award data prior to their publication on the USAspending.gov website.

After agencies submit the three files to the DATA Act broker, it runs a series of validations and produces warnings and error reports for agencies to review. After passing validations for these three files, the agencies are to generate Files D1 and D2, the files containing details on procurement and assistance awards. Before the data are displayed on USAspending.gov, agency senior accountable officials are required to certify the data submissions in accordance with OMB guidance.¹⁰ Certification is intended to assure alignment among Files A, B, C, D1, D2, E, and F, and to provide assurance that the data are valid and reliable. According to Treasury officials, once the certification is submitted a sequence of computer program instructions or scripts are issued to transfer and map the data from broker data tables to tables set up in a database used as a source for the information on the website. Certified data are then displayed on USAspending.gov along with certain historical information from other sources, including Monthly Treasury Statements.¹¹

OIG Methodology and Reporting Guidance for Assessing Agencies' DATA Act Submissions

The DATA Act requires each OIG to issue three reports on its assessment of the quality of the agency's data submission and compliance with the DATA Act. The first report was due November 8, 2016; however, agencies were not required to submit spending data in compliance with the DATA Act until May 2017. Therefore, the Council of the Inspectors General on Integrity and Efficiency (CIGIE) developed an approach to address what it described as a reporting date anomaly; encouraged interim OIG readiness reviews and related reports on agencies' implementation efforts; and delayed issuance of the mandated reports to November 2017, with subsequent reports following a 2-year cycle and due November 2019 and 2021.¹²

¹⁰Office of Management and Budget, *Additional Guidance for DATA Act Implementation: Implementing Data-Centric Approach for Reporting Federal Spending Information*, Management Procedures Memorandum No. 2016-03 (Washington, D.C.: May 3, 2016).

¹¹Monthly Treasury Statements are summary statements that Treasury prepares and issues based on agency accounting reports. Monthly Treasury Statements present the receipts, outlays, resulting budget surplus or deficit, and federal debt for the month and the fiscal year to date and a comparison of those figures to those of the same period in the previous year.

¹²CIGIE is an independent entity established within the executive branch to address integrity, economy, and effectiveness issues that transcend individual government agencies and aid in establishing a professional, well-trained, and highly skilled workforce in OIGs. CIGIE is primarily composed of federal agency inspectors general and its mission includes identifying, reviewing, and discussing areas of weakness and vulnerability in federal programs with respect to fraud, waste, and abuse.

CIGIE established the Federal Audit Executive Council (FAEC) to discuss and coordinate issues affecting the federal audit community, with special emphasis on audit policy and operations of common interest to FAEC members. FAEC formed the FAEC DATA Act Working Group to assist the OIG community in understanding and meeting its DATA Act oversight requirements by (1) serving as a working-level liaison with Treasury, (2) consulting with GAO, (3) developing a common approach and methodology for conducting the readiness reviews and mandated reviews, and (4) coordinating key communications with other stakeholders. To assist the OIG community, the FAEC DATA Act Working Group developed a common methodology and published the *Inspectors General Guide to Compliance Under the DATA Act* (IG Guide) for use in conducting mandated reviews.¹³

The IG Guide includes procedures to test data in agencies' Files A and B by reconciling these data to the information that agencies report in their quarterly SF 133, Report on Budget Execution and Budgetary Resources.¹⁴ The IG Guide also instructs OIGs to select a statistically valid sample of spending data from the agencies' available award-level transactions in File C, and among other procedures, to confirm whether these data are also included in the agencies' Files D1 and D2. The OIGs are also to confirm whether the transactions in the sample were linked to the award and awardee attributes in Files E and F. The data in Files E and F are reported by award recipients in two external government-wide systems, and are outside the direct control of the federal agencies, except for the General Services Administration, which manages these external systems. Based on additional guidance from the FAEC DATA Act Working Group, OIGs are not required to assess the quality of the award recipient-entered data that the broker extracted from the two external government-wide systems used to create Files E and F.

¹³Council of the Inspectors General on Integrity and Efficiency, Federal Audit Executive Council DATA Act Working Group, *Inspectors General Guide to Compliance Under the DATA Act*, OIG-CA-17-012 (Washington, D.C.: Department of the Treasury, Office of Inspector General, Feb. 27, 2017). The FAEC DATA Act Working Group made revisions to the IG Guide on July 6, 2017, to address review procedures that affected the OIGs' oversight work and posted the updated version on the CIGIE website.

¹⁴OMB requires all executive branch agencies to report their budget and financial information by submitting SF 133 data periodically through the Governmentwide Treasury Account Symbol Adjusted Trial Balance System (GTAS). Treasury uses GTAS, in part, to compile the *Financial Report of the U.S. Government*.

According to the IG Guide, the sampled spending data and testing results are to be evaluated using the following definitions for the requirements being assessed: **Completeness** is measured in two ways: (1) all transactions that should have been recorded are recorded in the proper reporting period, and (2) as the percentage of transactions containing all applicable data elements required by the DATA Act. **Timeliness** is measured as the percentage of transactions reported within 30 days of the end of the guarter. **Accuracy** is measured as the percentage of transactions that are complete and agree with the systems of record or other authoritative sources. **Quality** is defined in OMB guidance as a combination of utility, objectivity, and integrity.¹⁵ Utility refers to the usefulness of the information to the intended users. Objectivity refers to whether the disseminated information is being presented in an accurate, clear, complete, and unbiased manner. Integrity refers to the protection of information from unauthorized access or revision. The IG Guide also states that OIGs should assess agencies' implementation and use of the data standards, including evaluating each agency's process for reviewing the 57 required data elements and associated definitions that OMB and Treasury established and documenting any variances. **Prior GAO Reports** In November 2017, we issued our first report on data guality as required by the DATA Act, which identified issues with the completeness and Related to the DATA Act accuracy of the data that agencies submitted for the second guarter of and Data Quality fiscal year 2017, use of data elements, and presentation of the data on Beta. USAspending.gov.¹⁶ Among other things, we recommended that Treasury disclose known data guality issues and limitations on the new USAspending.gov website. Treasury agreed with that recommendation ¹⁵Office of Management and Budget, OMB's Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies (Feb. 22, 2002). ¹⁶GAO, DATA Act: OMB, Treasury, and Agencies Need to Improve Completeness and Accuracy of Spending Data and Disclose Limitations, GAO-18-138 (Washington, D.C.: Nov. 8, 2017).

and stated that it would develop a plan to better disclose known data quality issues. Since the DATA Act's enactment in 2014, we have issued a series of interim reports on our ongoing monitoring of the implementation of the DATA Act and made recommendations intended to help ensure effective government-wide implementation.¹⁷ However, many of those recommendations still remain open.

These reports identified a number of challenges related to OMB's and Treasury's efforts to facilitate agency reporting of federal spending, as well as internal control weaknesses and challenges related to agency financial management systems that we and agency auditors reported that present risks to agencies' ability to submit quality data as required under the act. For example, our prior work has identified issues with agency source systems that could affect the quality of spending data made available to the public. In April 2017, we reported a number of weaknesses and issues previously identified by agencies' auditors and OIGs that affect agencies' financial reporting and may affect the quality of the information reported under the DATA Act.¹⁸ We also reported on findings and recommendations from prior reports with issues on the four key award systems—FPDS-NG, SAM, the Award Submission Portal (ASP), and FSRS—which increase the risk that the data submitted to USAspending.gov may not be complete, accurate, and timely.

OIG Reviews of Agencies' DATA Act Submissions Varied in Scope and Type of Standards Used Based on our review of the 53 OIG reports, the scope of all of the OIG reviews covered their agencies' submission of spending data for the second quarter of fiscal year 2017 (i.e., January through March 2017). However, the files that the OIGs included in their scope to select and review sample transactions and the type of audit standards used—such as attestation examination engagement or performance audit—varied among the OIGs.

According to the IG Guide, the OIGs were to select and review a statistically valid sample of transactions, preferably from the agencies' File C certified data submissions; if File C was unavailable or did not contain data, they were to select their sample test items from Files D1

¹⁷For a list of related GAO products see the Related GAO Products list at the end of this report.

¹⁸GAO, *DATA Act: Office of Inspector General Reports Help Identify Agencies' Implementation Challenges*, GAO-17-460 (Washington, D.C.: Apr. 26, 2017).

and D2. Based on their survey responses, we found that most OIGs tested data from File C, File D1, File D2, or some combination of these agency file submissions. We also found that some OIGs tested a statistical sample of transactions in these files, while others tested all the transactions in the files because of the small population size. Further, we found that some OIGs used different files when testing for completeness, timeliness, or accuracy. For example, one OIG used File C when testing for completeness, File D1 when testing for timeliness, and File D2 when testing for accuracy. Overall, as shown in figure 2, the source files that 47 of the 53 OIGs used for testing accuracy were as follows.¹⁹

- Twenty-eight OIGs selected items for testing accuracy from File C.
- Twelve OIGs selected items for testing accuracy from Files D1, D2, or both.
- Seven OIGs selected items for testing accuracy from a combination of Files C, D1, and D2.

¹⁹Six OIGs did not indicate in their survey responses the source files they used to sample and test for accuracy.



Figure 2: Files Used by Offices of Inspector General (OIG) to Test Accuracy of Agency Spending Data

Source: GAO analysis of OIG survey responses. | GAO-18-546

Note: Six of the 53 OIGs did not identify the files used for testing accuracy (N=47).

The IG Guide also states that OIGs should conduct either attestation examination engagements or performance audits in accordance with generally accepted government auditing standards (GAGAS).²⁰ Performance audits are audits that provide findings or conclusions based

²⁰GAO, *Government Auditing Standards: 2011 Revision*, GAO-12-331G (Washington, D.C.: December 2011).

on an evaluation of sufficient, appropriate evidence against criteria.²¹ Attestation examination engagements involve obtaining sufficient, appropriate evidence with which to express an opinion stating whether the subject matter is in conformity with the identified criteria. In contrast to these two types of engagements that provide conclusions or opinions, agreed-upon procedures attestation engagements do not result in opinions or conclusions, but instead involve auditors performing specific procedures on the subject matter and issuing a report of findings.

All 53 OIGs reported that they performed their engagements in accordance with GAGAS; 47 OIGs reported that they conducted a performance audit, 5 reported that they performed an attestation examination engagement, and 1 reported that it performed an agreed-upon procedures attestation engagement. Twenty-one CFO Act agency OIGs and 26 non-CFO Act agency OIGs conducted performance audits, 3 CFO Act agency OIGs and 2 non-CFO Act agency OIGs conducted attestation examination engagements, and 1 non-CFO Act agency OIG conducted an agreed-upon procedures attestation engagement.

OIG Reports Show Variations in Agencies' Use of Data Standards and Quality of Data, and Most OIGs Made Recommendations to Address Identified Deficiencies According to the OIG reports, about half of the agencies met the OMB and Treasury requirements for implementation and use of data standards. However, almost three-fourths of OIGs determined that their respective agencies' submissions were not complete, timely, accurate, or of quality. Based on their reports and survey responses, certain OIGs also found data errors related to problems with how Treasury's DATA Act broker extracted information from external award reporting systems. The FAEC DATA Act Working Group considered these data errors to be a government-wide issue. Other errors that the OIGs identified may have been caused by agency-specific internal control deficiencies. Most of the OIGs made recommendations to agencies to help address the concerns they identified in their reports.

²¹The criteria the OIGs used are detailed in their reports and include, for example, OMB and Treasury guidance for agencies' DATA Act submissions.

OIG Reports Show About Half of the Agencies Met Requirements for Implementation and Use of Data Standards

Based on our review of the 53 OIG reports, we found that 27 OIGs determined that their agencies met OMB and Treasury requirements for implementation and use of the data standards, whereas 23 OIGs determined that their agencies did not meet these requirements. In addition, 3 CFO Act agency OIGs did not include an assessment of their agencies' implementation and use of the data standards in their reports.

The OIG reports described reasons why the 23 agencies did not meet the implementation and use of data standards requirements, including data submissions that did not include required data elements or included data elements that did not conform with the established data standards. For example, one OIG reported that 74 percent of transactions it tested did not contain program activity names or codes aligned with the President's Budget, and as a result, 39 percent of total obligations and 57 percent of total expenditures from that agency's data submission could not be aligned with established programs. Another OIG reported that because of inconsistent application of data standards and definitions across award systems, the agency's spending data were not complete, timely, or accurate.

In their survey responses, certain OIGs identified additional concerns about their agencies' implementation and use of data standards and related data elements. Specifically, six OIGs identified differences between their agencies' definitions of the data standards and OMB guidance. For example, two OIGs noted differences between definitions in OMB guidance and their agencies' definitions of "primary place of performance address." One of these OIGs noted that its agency submitted the wrong data, providing the address of the legal entity receiving the award instead of the address of the primary place where performance of the award will be accomplished or take place. In our November 2017 report, we also noted that OMB guidance for this data element was unclear and recommended that OMB clarify and align existing guidance regarding the appropriate definitions agencies should use to collect and report on primary place of performance and establish monitoring mechanisms to foster consistent application and compliance.²²

In addition, based on their survey responses, 21 OIGs reported error rates over 50 percent for 25 data elements. This includes 10 data

²²GAO-18-138.

elements that were reported by multiple OIGs and 15 data elements only reported by one OIG, as shown in table 1. There were five other data elements with error rates over 50 percent that the FAEC DATA Act Working Group determined to be government-wide broker-related data reporting issues, as discussed later in this report. The OIGs' survey responses did not indicate whether the data elements with errors were the result of issues related to the agencies' implementation or use of required data standards.

Table 1: Data Elements for Which Agency Offices of Inspector General (OIG) Reported an Error Rate over 50 Percent

Reported by multiple OIGs	Reported by one OIG
Period of performance start date	Action type
Primary place of performance address	Awarding agency code
Primary place of performance congressional district	Awarding agency name
Award identification number	Awarding office name
Highly compensated executive officer names	Awarding subtier agency code
Legal entity address	Awarding subtier agency name
North American Industry Classification System code	Contract award type
North American Industry Classification System description	Funding agency code
Parent award identification number	Funding office name
Type of transaction code	Funding subtier agency code
_	Funding subtier agency name
_	Legal entity name
_	Primary place of performance country code
	Transaction obligated amount
_	Ultimate parent unique identifier

Legend: — = blank cell.

Source: GAO analysis of OIG survey responses. | GAO-18-546

<sup>Notes: 1. The data elements above include those with OIG-identified errors resulting from agency-specific issues and exclude those with errors resulting from the Department of the Treasury's Digital Accountability and Transparency Act of 2014 broker-related issues.
2. The Treasury broker is a system that collects and validates agency-submitted data to create linkages between the financial and award data prior to their publication on the USAspending.gov website.</sup>

OIG Reports and Survey Responses Show Most Agencies Did Not Submit Complete, Timely, Accurate, or Quality Data

Based on the OIG reports, we found that 15 of the 53 OIGs determined that their agencies' data were generally complete, timely, accurate, or of quality, comprising 6 CFO Act agency OIGs and 9 non-CFO Act agency OIGs (see fig. 3). Conversely, 38 of 53 OIGs determined that their agencies' data were not complete, timely, accurate, or of quality, comprising 18 CFO Act agency OIGs and 20 non-CFO Act agency OIGs. OIG reports did not always include separate assessments for completeness, timeliness, and accuracy, but gave an overall assessment of the quality of the data.

Figure 3: Completeness, Timeliness, Accuracy, and Quality of Agency Data Reported by Offices of Inspector General (OIG)



CFO Act - Chief Financial Officers Act of 1990

As part of our OIG survey, we requested the overall error rates, agencyspecific error rates, and broker error rates for each requirement completeness, timeliness, and accuracy—used to evaluate the quality of data tested to help provide more insights on the nature and extent of errors that the OIGs identified.²³ For the purposes of our survey, based on guidance from the FAEC DATA Act Working Group and in the IG Guide, these error rates were defined as follows:

Source: GAO analysis of Office of Inspector General reports. | GAO-18-546

²³According to information for OIGs' consideration from the FAEC DATA Act Working Group, the OIGs' calculations of error rates were not to include any warning messages generated by the DATA Act broker. When agency data do not pass the broker validation checks, the agency will receive a warning or critical error message. The broker will accept data for submission if the validation results in a warning message; however, a critical error message will prevent the data from being submitted. Before Treasury replaced ASP with FABS in September 2017, ASP partially accepted file submissions if less than 10 percent of the records in a file submission failed validation checks.

- **Overall error rate** is the percentage of transactions tested that were not in accordance with policy, and includes errors due to the agency, broker, and external award reporting systems.
- Agency error rate is the percentage of transactions tested that were not in accordance with policy, and includes only errors that were within the agency's control.
- Broker error rate is the percentage of transactions tested that were not in accordance with policy, and includes only errors due to the broker and external award reporting systems.

With regard to overall error rates and the tests conducted, 40 OIGs reported that they tested a statistical sample of transactions, 9 OIGs reported that they tested all transactions in the populations of data, and 4 OIGs reported that they did not test any transactions or were unable to complete their testing. As shown in figure 4, our survey results show that the 40 OIGs that tested a statistical sample of transactions generally reported higher (projected) overall error rates for the accuracy and completeness of data than for the timeliness of data. We found similar results based on our tests to assess the completeness, timeliness, and accuracy of government-wide spending data that we tested for the same time period, as described in our November 2017 report.²⁴ More than half of the 40 OIGs reported projected overall error rates of 25 percent or greater for accuracy, including 8 OIGs reporting projected accuracy error rates of over 75 percent. In contrast, more than three-fourths of the OIGs projected overall error rates of less than 25 percent for completeness and timeliness of their agencies' data.

²⁴GAO-18-138.





Note: The data presented above are based on survey responses of the 40 OIGs that reported testing a statistical sample of their agencies' spending transactions. Of these 40 OIGs, 4 OIGs did not provide overall error rates for completeness, 3 OIGs did not provide overall error rates for timeliness, and 4 OIGs did not provide overall error rates for accuracy.

See appendix II for more details on the 53 OIGs' individual agency testing results, including the actual overall error rates for those OIGs that tested the full population of transactions included in their agencies' data submissions and the estimated range of projected overall error rates for OIGs that conducted a statistical sample.

The OIG survey responses that included agency-specific error rates showed that the agency-specific error rates were similar to the overall error rates, with accuracy of data having higher error rates than those for completeness and timeliness. Fourteen OIGs provided agency-specific error rates for accuracy, 13 OIGs provided agency-specific error rates for completeness, and 12 OIGs provided agency-specific error rates for timeliness of the data sampled.

In addition, nine OIGs reported error rates for broker-related errors that, similar to the overall and agency-specific error rates, had higher error rates for accuracy of data than for completeness and timeliness. The FAEC DATA Act Working Group determined that the broker-related errors had a government-wide impact, as discussed further below. In October 2017—1 month before the mandated reports were to be issued—the

	working group provided guidance to the OIGs suggesting that they determine and report these additional broker error rates separately because they were not within the agencies' control. Some OIGs may not have reported separate agency-specific and broker error rates as their work was already substantially completed.
	Of the nine OIGs that reported they tested all transactions in the populations of their agencies' data, five OIGs reported actual overall error rates and found that overall error rates for accuracy were higher than the error rates for completeness or timeliness. Of the four OIGs that reported agency-specific error rates, only one OIG reported an error rate for accuracy, and it was greater than 75 percent. One OIG reported a broker error rate, and it was higher for accuracy than for completeness or timeliness.
	In addition to using different testing methodologies (e.g., statistical sampling or testing the full population of transactions) and source files, as previously discussed, the OIGs also used different assumptions and sampling criteria to design and select sample items for testing. As a result, the overall error rates are not comparable and a government-wide error rate cannot be projected.
DATA Act Broker-Related Issues Caused Certain Government-wide Data Reporting Errors	Based on discussions with OIGs, the FAEC DATA Act Working Group identified certain data errors caused by broker-related issues that it determined to be government-wide data reporting issues. Also, because the broker is maintained by Treasury, these issues were beyond the control of the affected agencies. According to the working group, these issues involve inconsistencies in data the broker extracted from government-wide federal financial award reporting systems, as described in table 2. To help provide consistency in reporting these issues, the working group developed standard report language used by OIGs in their reports to describe the errors caused by the broker. The standard reporting language stated that because agencies do not have responsibility for how the broker extracts data, the working group did not expect agency OIGs to evaluate the reasonableness of Treasury's planned corrective actions.

Table 2: Government-wide Data Reporting Issue	es Caused by the Treasury Broker
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Data element	Definition	Broker-related issue
Current total value of award	For procurement awards, the total amount obligated to date on a contract	The broker extracted incorrect information from an award reporting system, resulting in reported values inconsistent with agency records.
Potential total value of award	For procurement awards, the total amount that could be obligated on a contract	The broker extracted incorrect information from an award reporting system, resulting in reported values inconsistent with agency records.
Indefinite delivery vehicle	For procurement awards, an indefinite delivery contract or agreement	The broker extracted this information from an award system that provided two data elements instead of one, resulting in reported values inconsistent with agency records.
Legal entity city code	For financial assistance awards, the city where the awardee or recipient is located	The broker extracted this information from an award reporting system that discontinued generating this data element in January 2017, resulting in this field consistently being left blank.
Primary place of performance county name	For financial assistance awards, the county where the predominant performance of the award will be accomplished	The broker extracted this information from an award reporting system that was not to begin generating this data element until September 2017, resulting in this field consistently being left blank.

Legend: broker = Treasury's Digital Accountability and Transparency Act of 2014 broker; Treasury = Department of the Treasury. Source: GAO analysis of standard reporting language provided by the Federal Audit Executive Council Digital Accountability and Transparency Act Working Group. | GAO-18-546

Note: The Treasury broker is a system that collects and validates agency-submitted data to create linkages between the financial and award data prior to their publication on the USAspending.gov website.

In April 2018, a Treasury official told us that the issues causing these problems have been resolved. To address these issues, the Treasury official stated that, among other things, Treasury implemented the DATA Act Information Model Schema version 1.1, loaded previously missing historical procurement data to USAspending.gov, updated how information from FPDS-NG is mapped to File D1, and replaced ASP with FABS. However, we plan to follow up on these efforts as a part of our ongoing monitoring efforts.

OIGs Identified Agency-	In their survey responses and OIG reports, 43 OIGs reported agency-
Specific Control	specific control deficiencies that may have contributed to or increased the
Deficiencies That May	risk of data errors. Of these 43 OIGs, 37 OIGs identified deficiencies
Have Contributed to Data	affecting accuracy, 32 OIGs identified deficiencies affecting
Errors	completeness, and 14 OIGs identified deficiencies affecting timeliness. A
	few OIGs reported that they leveraged their financial statement audit
	results, which found deficiencies in certain financial reporting controls, in
	conducting their DATA Act reviews. We categorized the OIGs' reported

control deficiencies and found that the categories with the most frequently reported deficiencies related to their agencies' lack of effective procedures or controls, such as conducting reviews and reconciliations of data submissions to source systems, and information technology system deficiencies, as shown in figure 5. In their survey responses, OIGs provided additional information about whether their agencies' controls over agency source systems and controls over the DATA Act submission processes were properly designed, implemented, and operating effectively to achieve their objectives. For both CFO Act and non-CFO Act agencies, OIGs generally reported that agencies' internal controls over source systems and the DATA Act submission process were designed effectively but were not implemented or operating effectively as designed.

Figure 5: Number of Agencies with Control Deficiencies Reported by Offices of Inspector General (OIG), by Type of Deficiency



Source: GAO analysis of OIG survey responses. | GAO-18-546

Note: Ten of the 53 OIGs did not identify any control deficiencies (N=43).

^aThe Treasury broker is a system that collects and validates agency-submitted data to create linkages between the financial and award data prior to their publication on the USAspending.gov website.

Some examples of agency-specific control deficiencies reported by the OIGs are as follows.

Lack of effective procedures or controls. Deficiencies where agency procedures for reviewing and reconciling data and files to different sources were not performed, or were performed ineffectively, or standard operating procedures for data submissions had not been designed and implemented. For example, some of these deficiencies related to agencies' lack of review or reconciliation of data in Files A and B to data in Files D1 and D2. Further, two OIGs found that their agencies did not perform any sort of quality review of their data until after they were submitted to the broker. Another OIG found that its agency did not ensure that its components developed objectives for accomplishing its data submissions, assessed the risks to achieving those objectives, or established corresponding controls to address them. As a result, the agency's DATA Act submissions included errors.

Information technology system deficiencies. Deficiencies related to the lack of effective automated systems controls necessary to ensure proper system user access or automated quality control procedures and the accuracy and completeness of data, as well as systems that are not compliant with federal financial management system requirements. For example, one OIG noted that its agency experienced issues related to segregation of duties and access controls that affected the agency's ability to ensure completeness and accuracy of data in its financial, procurement, and grant processing systems. Another OIG found that its agency did not complete necessary system updates to ensure that all data were certified prior to submission. Further, an OIG reported that its agency's information system was unable to combine transactions with the same unique identifiers, resulting in over 12,000 transactions being removed because of broker warnings.

Insufficient documentation. Deficiencies related to agencies' production and retention of documentary evidence supporting their DATA Act submissions. For example, three OIGs found that their agencies were unable to provide supporting documentation for various portions of their DATA Act submissions. Another OIG reported that one of its agency's components did not take effective steps to ensure that procurement and grant personnel understood the specific documentation that should be maintained to support data entered in grant and contract files. Further, another OIG found that its agency did not document the process for compiling the agency's DATA Act submission files.

Inappropriate application of data standards and data elements.

Deficiencies related to the inappropriate use of data definition standards or the misapplication of data elements. For example, one OIG found that its agency did not identify the prior year funding activity names or codes for all transactions included in its spending data submission. Another OIG found that its agency did not consistently apply standardized object class codes in compliance with OMB guidance, as well as standardized U.S. Standard General Ledger account codes as outlined in Treasury guidance. Similarly, an OIG reported instances where agency users of certain award systems were not knowledgeable about how required DATA Act elements were reported in their procurement system.

Data entry errors or incomplete data. Deficiencies related to controls over data entry and errors or incomplete data in agency or government-wide external systems. For example, an OIG found that its agency did not include purchase card transactions greater than \$3,500, which represented about 1 percent of the agency's data submission. Another OIG reported that its agency's service provider did not enter miscellaneous obligations in the data submission file because it expected the agency to enter such transactions in the federal procurement data system.

Timing errors. Deficiencies related to delays in reporting information to external government-wide systems that result in errors in the data submitted. For example, one OIG reported that its agency did not take effective steps to ensure that contracting officers timely report required DATA Act award attribute information in FPDS-NG. Another OIG reported that a bureau in its agency consistently submitted certain payment files 2 months late, resulting in incomplete Files C and D2 in the agency's data submission.

Inaccurate broker uploads. Deficiencies related to agencies uploading data to the broker. For example, one OIG found a lack of effective internal controls over data reporting from its agency's source systems to the DATA Act broker for ensuring that the data reported are complete, timely, accurate, and of quality. Specifically, certain components were not able to consolidate data from multiple source systems and upload accurate data to the broker for File C. Another OIG reported that the broker could not identify and separate an individual component's award data from agency-wide award data. Specifically, the broker recognized only agency-wide award data and did not include award data from its agency's individual components. As a result, the OIG reported that the component did not include all of the agency's required award data.

Reliance on manual processes. Deficiencies that cause agencies to rely on manual processes and work-arounds. For example, one OIG found that in the absence of system patches to map data elements directly from feeder award systems to financial systems, its agency developed an interim solution that relied heavily on manual processes to collect data from multiple owners and systems and increased the risk for

data quality to be compromised. Another OIG reported that its agency's financial management systems are outdated and unable to meet DATA Act requirements without extensive manual efforts, resulting in inefficiencies in preparing data submissions.

Other. Other deficiencies including, among other things, instances where an agency's senior accountable official did not submit a statement of assurance certifying the reliability and validity of the agency account-level and award-level data submitted to the DATA Act broker, an agency did not provide adequate training and cross-training of personnel on the various DATA Act roles, and certain components of one agency were not included in the agency's DATA Act executive governance structure.

Most OIGs Made Recommendations to Agencies to Improve Data Quality and Controls

To help address control deficiencies and other issues that resulted in data errors, 48 of the 53 OIGs (23 CFO Act agency OIGs and 25 non-CFO Act agency OIGs) included recommendations in their reports. As shown in figure 6, the most common recommendations OIGs made to their agencies related to the need for agencies to develop controls over their data submissions, develop procedures to address errors, and finalize or implement procedures or guidance.

Figure 6: Number of Agencies with Recommendations Made by Offices of Inspector General (OIG), by Type of Recommendation

Develop controls over submission process

Develop procedures to address errors

Finalize or implement procedures or guidance

Maintain documentation

Provide training

Work with Department of the Treasury, Office of Management and Budget, and other external stakeholders

Implement systems controls or modify systems

Increase resources



Chief Financial Officers Act of 1990 (CFO Act) agencies

Non-CFO Act agencies

Source: GAO analysis of OIG survey responses. | GAO-18-546

Note: Five of the 53 OIGs did not make any recommendations (N=48).

Some examples of OIG recommendations made to agencies to improve data quality and controls are as follows.

Develop controls over submission process. Recommendations related to controls or processes to resolve issues in submitting agency financial system data to the broker. For example, one OIG recommended that its agency develop and implement a formal process to appropriately address significant items on broker warning reports, which could indicate systemic issues.

Develop procedures to address errors. Recommendations related to procedures to address data errors in the agency's internal systems. For example, one OIG recommended that its agency correct queries to extract the correct information and ensure that all reportable procurements are included in its DATA Act submissions.

Finalize or implement procedures or guidance. Recommendations related to establishing and documenting an agency's DATA Act-related standard operating procedures or agency guidance, including the roles and responsibilities of agency stakeholders. For example, one OIG recommended that its agency update its guidance on what address to use for primary place of performance to be consistent with OMB and Treasury guidance.

Maintain documentation. Recommendations related to establishing or maintaining documentation of the agency's procedures, controls, and related roles and responsibilities for performing them. For example, one OIG recommended that its agency develop a central repository for grant award documentation and maintain documentation to support its DATA Act submissions.

Provide training. Recommendations related to developing, implementing, and documenting training for an agency's DATA Act stakeholders. For example, one OIG recommended that its agency provide mandatory training to all contracting officers and grant program staff to ensure their understanding of DATA Act requirements.

Work with Treasury, OMB, and other external stakeholders.

Recommendations for the agency to work with Treasury, OMB, or other stakeholders external to the agency to resolve government-wide issues. For example, one OIG recommended that its agency work closely with its federal shared service provider to address timing and coding errors that the service provider caused for future DATA Act submissions.

Implement systems controls or modify systems. Recommendations related to developing and implementing automated systems and controls. For example, one OIG recommended that its agency complete the implementation of system interfaces and new procedures that are designed to improve collection of certain data that were not reported timely to FPDS-NG and improve linkages of certain financial transactions and procurement awards using a unique procurement instrument identifier.

Increase resources. Recommendations related to increasing the staff, resources, or both necessary to fully implement DATA Act requirements. For example, one OIG recommended that its agency allocate the resources to ensure that reconciliations are performed when consolidating source system data to the DATA Act submission files.

Management for 36 agencies stated that they concurred or generally concurred with the recommendations of their OIGs (see fig. 7). Management at many of these agencies stated that they continued to improve their processes and controls for subsequent data submissions. In addition, management for seven agencies stated that they partially concurred with the recommendations that their OIGs made. Management for two agencies did not concur with their OIGs' recommendations. Management for one agency that did not concur with the recommendations stated that they should not be held responsible for data discrepancies that other agencies caused, and management for the other agency stated that they followed authoritative guidance that OMB and Treasury issued related to warnings and error messages.



Figure 7: Agencies' Responses to Offices of Inspector General (OIG) Report Recommendations

Source: GAO analysis of OIG survey responses. | GAO-18-546

Note: Five of the 53 OIGs did not make any recommendations (N=48).

OMB Staff and Treasury Officials Said They Use OIG Reports to Identify and Resolve Issues and Determine the Need for Additional Guidance

OMB staff told us that they reviewed the OIG reports—focusing on the 24 CFO Act agencies—to better understand issues that the OIGs identified and to determine whether additional guidance is needed to help agencies improve the completeness, timeliness, accuracy, and quality of their DATA Act submissions. OMB staff explained to us how they have or are planning to address OIG-identified issues. OMB staff told us that in April 2017 the CFO Council's DATA Act Audit Collaboration working group was formed, which includes officials from OMB, Treasury, and the Chief Financial Officers (CFO) Council to foster collaboration and understanding of the risks that were being identified as agencies prepared and submitted their data.²⁵ The working group also consults with CIGIE, which is not a member of the working group, but its representatives attend meetings to help the group members better understand issues involving the OIG reviews and the IG guide. According to OMB staff, the working group is the focal point to identify governmentwide issues and identify guidance that can be clarified. They also told us that OMB continues to meet with this working group to determine what new guidance is needed to meet the DATA Act requirement to ensure that the standards are applied to the data available on the website. In June 2018, OMB issued new guidance requiring agencies to develop data quality plans intended to achieve the objectives of the DATA Act.²⁶ According to OMB staff, OMB is committed to ensuring integrity and providing technical assistance to ensure data quality.

Treasury officials told us that they reviewed OIG reports that were publicly available on Oversight.gov and are collaborating with OMB and the CFO Council to identify and resolve government-wide issues, including issues related to the broker, so that agencies can focus on resolving their agency-specific issues. In February 2018, the working group documented certain topics identified for improving data quality and value.

²⁵The CFO Council is an organization of the CFOs and deputy CFOs of the largest federal agencies and senior OMB staff and Treasury officials who work collaboratively to improve financial management in the U.S. government.

²⁶Office of Management and Budget, *Appendix A to OMB Circular No. A-123, Management of Reporting and Data Integrity Risk*, OMB Memorandum M-18-16 (June 6, 2018). According to the guidance, the quarterly certifications of data that agency senior accountable officials submit should be based on the consideration of the data quality plan and the internal controls documented in the plan as well as other existing controls that may be in place.

	OMB staff and Treasury officials also told us that OMB and Treasury have taken steps to address issues we previously reported related to their oversight of agencies' implementation of the DATA Act. For example, we recommended in April 2017 that OMB and Treasury take appropriate actions to establish mechanisms to assess the results of independent audits and reviews of agencies' compliance with the DATA Act requirements. ²⁷ The DATA Act Audit Collaboration working group is one of the mechanisms OMB and Treasury use to assess and discuss the results of independent audits and to address identified issues.
	In November 2017, we also recommended, among other things, that Treasury (1) reasonably assure that ongoing monitoring controls to help ensure the completeness and accuracy of agency submissions are designed, implemented, and operating as designed, and (2) disclose known data quality issues and limitations on the new USAspending.gov. ²⁸ Treasury has taken some steps and is continuing to take steps to address these recommendations. For example, under the data quality section of the About page on USAspending.gov, Treasury disclosed the requirement for each agency OIG to report on its agency's compliance with the DATA Act and noted the availability of the reports at Oversight.gov.
Agency Comments	We provided a draft of this report to OMB, Treasury, and CIGIE for comment. We received written comments from CIGIE that are reproduced in appendix III and summarized below. In addition, OMB, Treasury, and CIGIE provided technical comments, which we incorporated as appropriate.
	In its written comments, CIGIE noted that the report provides useful information on OIG efforts to meet oversight and reporting responsibilities under the DATA Act. CIGIE further stated that it believes that the report will contribute to a greater understanding of the oversight work that the OIG community performs and of agency efforts to report and track government-wide spending more effectively.

²⁷GAO-17-460.

²⁸GAO-18-138.

We are sending copies of this report to the Director of the Office of Management and Budget, the Secretary of the Treasury, the Chairperson and Vice Chairperson of the Council of the Inspectors General on Integrity and Efficiency, as well as interested congressional committees and other interested parties. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.

If you or your staffs have any questions about this report, please contact me at (202) 512-9816 or rasconap@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix IV.

Paula M Rascona

Paula M. Rascona Director Financial Management and Assurance
List of Addressees

The Honorable Ron Johnson Chairman The Honorable Claire McCaskill Ranking Member Committee on Homeland Security and Governmental Affairs United States Senate

The Honorable Rob Portman Chairman The Honorable Thomas R. Carper Ranking Member Permanent Subcommittee on Investigations Committee on Homeland Security and Governmental Affairs United States Senate

The Honorable Trey Gowdy Chairman The Honorable Elijah E. Cummings Ranking Member Committee on Oversight and Government Reform House of Representatives

The Honorable Mark Meadows Chairman The Honorable Gerald E. Connolly Ranking Member Subcommittee on Government Operations Committee on Oversight and Government Reform House of Representatives

The Honorable Will Hurd Chairman The Honorable Robin Kelly Ranking Member Subcommittee on Information Technology Committee on Oversight and Government Reform House of Representatives

The Honorable Mark R. Warner United States Senate

Appendix I: Objectives, Scope, and Methodology

The Digital Accountability and Transparency Act of 2014 (DATA Act) includes provisions requiring¹ us to review the Offices of Inspector Generals' (OIG) mandated reports and issue our own reports assessing and comparing the completeness, timeliness, accuracy, and quality of the data that federal agencies submit under the act and the federal agencies' implementation and use of data standards.² We issued our first report on data quality in November 2017, as required.³ This report includes our review of the OIGs' mandated reports, which were also issued primarily in November 2017. Our reporting objectives were to describe

- 1. the reported scope of work covered and type of audit standards OIGs used in their reviews of agencies' DATA Act spending data;
- any variations in the reported implementation and use of data standards and quality of agencies' data, and any common issues and recommendations reported by the OIGs; and
- the actions, if any, that the Office of Management and Budget (OMB) and the Department of the Treasury (Treasury) have reported taking or planning to take to use the results of OIG reviews to help monitor agencies' implementation of the act.

To address our first and second objectives, we obtained and reviewed 53 OIG reports that were issued on or before January 31, 2018,⁴ including reports related to 24 Chief Financial Officers Act of 1990 (CFO Act)

¹Pub. L. No. 113-101, 128 Stat. 1146 (May 9, 2014). The DATA Act amended the Federal Funding Accountability and Transparency Act of 2006 (FFATA). Pub. L. No. 109-282, 120 Stat. 1186 (Sept. 26, 2006), *codified at* 31 U.S.C. § 6101 note. We refer to language added to FFATA by the DATA Act as DATA Act requirements.

²The DATA Act defines "federal agency" by reference to the definition of "executive agency" set out in section 105 of Title 5, United States Code.

³GAO, DATA Act: OMB, Treasury, and Agencies Need to Improve Completeness and Accuracy of Spending Data and Disclose Limitations, GAO-18-138 (Washington, D.C.: Nov. 8, 2017).

⁴DATA Act reports were issued by 55 OIGs by January 31, 2018, including reports from Treasury's OIG, the Treasury Inspector General for Tax Administration (TIGTA), and GAO's OIG. Treasury's OIG and TIGTA performed separate audits and issued separate reports, in addition to Treasury OIG issuing a combined report. We used the Treasury OIG and TIGTA combined report for this review. We did not include the GAO OIG report in our review for independence reasons.

agencies⁵ and 29 non-CFO Act agencies.⁶ Of 91 entities for which second quarter fiscal year 2017 spending data were submitted, we did not obtain and review OIG DATA Act reports for 38 entities with obligations totaling at least \$1.2 billion (as displayed on USAspending.gov on May 23, 2018) because no reports for those entities were publicly available by our January 31, 2018, cutoff date.⁷

Table 3 lists the 53 agencies for which we obtained and reviewed the OIG reports on the quality of data that agencies submitted in accordance with DATA Act requirements.

 Table 3: Offices of Inspector General Digital Accountability and Transparency Act of 2014 Reports Reviewed by GAO, by

 Agency

Chief Financial Officers Act (CFO Act) agencies	Non-CFO Act agencies
Department of Agriculture	Broadcasting Board of Governors
Department of Commerce	Commodity Futures Trading Commission
Department of Defense	Consumer Financial Protection Bureau
Department of Education	Consumer Product Safety Commission
Department of Energy	Corporation for National & Community Service
Department of Health and Human Services	Court Services and Offender Supervision Agency for the District of Columbia
Department of Homeland Security	Defense Nuclear Facilities Safety Board
Department of Housing and Urban Development	Denali Commission
Department of the Interior	Election Assistance Commission
Department of Justice	Equal Employment Opportunity Commission
Department of Labor	Export-Import Bank
Department of State	Federal Communications Commission
Department of Transportation	Federal Deposit Insurance Corporation

⁵The CFO Act, Pub. L. No. 101-576, 104 Stat. 2838 (Nov. 15, 1990), among other things, established chief financial officer positions at major federal entities. The current list of 24 included entities, commonly referred to as CFO Act agencies, is codified at section 901 of title 31, United States Code.

⁶Some OIGs contracted out the performance of these mandated reviews to independent public accountants. For purposes of this report, we refer to the reviews conducted by the OIGs and their contractors and the resulting reports collectively as OIG reviews or reports, unless otherwise noted.

⁷Seventy-eight agencies submitted fiscal year 2017 data covering 91 federal entities, including smaller entities such as commissions, boards, and foundations. Many of the 38 entities for which we did not obtain and review an OIG report do not have a statutory OIG.

Chief Financial Officers Act (CFO Act) agencies	Non-CFO Act agencies
Department of the Treasury	Federal Election Commission
Department of Veterans Affairs	Federal Labor Relations Authority
Environmental Protection Agency	Federal Maritime Commission
General Services Administration	Federal Trade Commission
National Aeronautics and Space Administration	Gulf Coast Ecosystem Restoration Council
National Science Foundation	International Trade Commission
Nuclear Regulatory Commission	Millennium Challenge Corporation
Office of Personnel Management	National Archives and Records Administration
Small Business Administration	National Credit Union Administration
Social Security Administration	National Endowment for the Arts
U.S. Agency for International Development	National Labor Relations Board
-	Peace Corps
-	Pension Benefit Guaranty Corporation
-	Railroad Retirement Board
-	Securities and Exchange Commission
-	U.S. Army Corps of Engineers

Legend: - = blank cell.

Source: GAO analysis of Offices of Inspector General and Oversight.gov information. | GAO-18-546

We also developed and conducted a survey of OIGs to provide further details on the design and results of their efforts to conduct statistical samples to select and test agencies' data submissions and reviews of internal controls. In November 2017, we sent the survey to those OIGs whose agencies originally submitted DATA Act data to Treasury's DATA Act broker. We received and reviewed responses from the 53 OIGs that we obtained reports from, with 9 OIGs including the completed surveys in their published reports and the others providing us their completed survey responses separately. We analyzed 53 OIG reports and survey responses, following up with OIGs for clarification when necessary.

We reviewed each of the 53 OIG reports we obtained and identified the reported scope of work covered (e.g., the quarter of data reviewed) and the type of audit standards OIGs used to conduct their reviews (e.g., performance audit or attestation examination engagement). We also developed and used a data collection instrument to compile and summarize the conclusions and opinions included in the OIG reports on the completeness, timeliness, accuracy, and quality of agencies' data submissions and their implementation and use of data standards. During this process, GAO analysts worked in teams of three to reach a

consensus on how these OIG conclusions and opinions were categorized. For OIG reports that did not specifically state whether the agencies met the DATA Act requirements, we considered the reported results in conjunction with the more detailed information provided in the OIG responses to our survey and made conclusions about the OIGs' assessments based on our professional judgment.

We also reviewed the OIG reports and survey responses and used two data collection instruments to compile, analyze, and categorize common issues or agency-specific control deficiencies the OIGs identified in their reviews and recommendations they made to address them. During this process, GAO analysts worked in teams of three to obtain a consensus in how these issues and deficiencies were categorized.

To address our third objective, we interviewed OMB staff and Treasury officials about how they used or planned to use the results of the OIG DATA Act reviews to assist them in their monitoring of agencies' implementation of the act.

We conducted this performance audit from September 2017 to July 2018 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 our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Offices of Inspector General Digital Accountability and Transparency Act of 2014 Testing Results

In their survey responses, Offices of Inspector General (OIG) for 45 agencies reported actual overall error rates or estimated error rates and estimated ranges of errors associated with the spending data transactions they tested for accuracy, completeness, or timeliness (see table 4).¹ These results include OIGs that tested a statistical sample of transactions, tested the full population, and conducted an assessment of internal controls without additional substantive testing. OIGs that tested a sample responded that they used different sampling criteria, and the sources of files they used to select their statistical samples varied based on the files that were available. Regardless of whether the OIG tested a sample or the full population, some of the OIGs selected items for testing from File C, File D1, File D2, or some combination thereof. As a result, the overall error rates the OIGs reported are not from the same data submission files and are not fully comparable, but are intended to provide additional information on the individual results of the completeness, timeliness, and accuracy of the data each agency OIG tested.

Agency	, , , , , , , , , , , , , , , , , , , ,	Overall error rate [estimated ranges ^b] (percentage)		
number		Accuracy	Completeness	Timeliness
1	Statistical sample	100[99-100]	100[99-100]	0[0-1]
2	Statistical sample	100[98-100]	100[98-100]	0[0-2]
3	Statistical sample	100[95-100]	0[0-5]	0[0-5]
4	Internal controls assessment	100	100	N/A
5	Full population	100	100	100
6	Statistical sample	97[95-99]	22[18-26]	4[2-6]
7	Statistical sample	96[94-98]	24[20-28]	3[1-5]
8	Statistical sample	91[87-95]	6[2-10]	N/A
9	Full population	91	46	0
10	Statistical sample	89[83-94]	0[0-2]	0[0-2]
11	Statistical sample	90[87-92]	29[25-32]	30[26-33]
12	Full population	89	9	100
13	Statistical sample	76[71-80]	31[26-35]	0[0-2]
14	Statistical sample	75[73-77]	15[13-17]	6[5-7]
15	Statistical sample	74[69-78]	19[15-23]	0[0-1]

Table 4: Agency Offices of Inspector General (OIG) Digital Accountability and Transparency Act of 2014 Testing Results

¹Overall error rate is the percentage of transactions tested that were not in accordance with policy, and includes errors due to the agency, broker, and external award reporting systems.

Appendix II: Offices of Inspector General Digital Accountability and Transparency Act of 2014 Testing Results

Agency	y Testing methodology ^a	Overall error rate [estimated ranges ^ь] (percentage)		
number		Accuracy	Completeness	Timeliness
16	Statistical sample	72[69-75]	16[14-18]	15[13-17]
17	Statistical sample	64[59-69]	22c	14[9-19]
18	Statistical sample	63[57-68]	4[2-7]	0[0-1]
19	Statistical sample	62[56-68]	98[96-100]	1[0-3]
20	Statistical sample	60[46-74]	49[34-64]	13[3-23]
21	Statistical sample	57[52-62]	0[0-1]	0[0-1]
22	Statistical sample	55[50-60]	55[50-60]	55[50-60]
23	Statistical sample	41[24-61]	0[0-10]	0[0-10]
24	Statistical sample	38[33-43]	4[2-6]	14[11-18]
25	Statistical sample	37[32-42]	37[32-42]	37[32-42]
26	Statistical sample	32[28-37]	2[1-4]	0[0-2]
27	Statistical sample	31[26-35]	7[5-10]	0[0-2]
28	Statistical sample	29[25-33]	29[25-33]	0[0-2]
29	Statistical sample	21[17-25]	0[0-1]	0[0-1]
30	Statistical sample	8[6-11]	0[0-1]	0[0-1]
31	Statistical sample	5[3-8]	5[3-8]	33[28-38]
32	Statistical sample	2[1-5]	0[0-1]	0[0-1]
33	Statistical sample	2[1-4]	N/A	0
34	Statistical sample	1[0-2]	19[15-23]	0[0-0]
35	Full population	1	11	0
36	Statistical sample	0[0-3]	0[0-3]	0[0-3]
37	Statistical sample	0[0-3]	0[0-3]	3[0-7]
38	Statistical sample	N/A	N/A	0[0-2]
39	Statistical sample	0[0-13]	0[0-13]	0[0-13]
40	Statistical sample	0[0-2]	0[0-2]	0[0-2]
41	Statistical sample	0[0-2]	0[0-2]	0[0-2]
42	Full population	0	0	0
43	Statistical sample	0[0-1]	0[0-1]	0[0-1]
44	Internal controls assessment	N/A	90	90
45	Statistical sample	N/A	18[15-22]	3[2-5]
46	Statistical sample	N/A	N/A	N/A
47	Internal controls assessment	N/A	N/A	N/A
48	Full population	N/A	N/A	N/A
49	Statistical sample	N/A	N/A	N/A
50	Full population	N/A	N/A	N/A
51	Full population	N/A	N/A	N/A

Appendix II: Offices of Inspector General Digital Accountability and Transparency Act of 2014 Testing Results

Agency	Testing methodology ^a	Overall error rate [estimated ranges ^b] (percentage)		
number		Accuracy	Completeness	Timeliness
52	Full population	N/A	N/A	N/A
53	No test or internal control assessment conducted	N/A	N/A	N/A

Legend: N/A = Error rate information was not indicated in the OIG report or survey response.

Source: GAO analysis of OIG reports and survey responses. | GAO-18-546

^aOIGs reported using different methodologies to test agencies' data submissions, such as testing a statistical sample or the full population of transactions included in a data submission, or relying on an initial assessment of an agency's internal controls because of various issues that limited the OIG's ability to complete testing.

^bEstimated ranges of errors are presented based on 95 percent confidence intervals.

Appendix III: Comments from the Council of the Inspectors General on Integrity and Efficiency

Council of the INSPECTORS GENERAL on INTEGRITY and EFFICIENCY
July 11, 2018
Ms. Paula Rascona Director, Financial Management and Assurance U.S. Government Accountability Office 441 G Street, N.W. Washington, D.C. 20548
Dear Ms. Rascona:
On behalf of the Council of the Inspectors General on Integrity and Efficiency (CIGIE), we appreciate the opportunity to provide this response to the Government Accountability Office (GAO) draft report, <i>DATA Act: Reported Quality of Agencies' Spending Data Reviewed by OIGs Varied Because of Government-wide and Agency Issues,</i> report number GAO-18-546.
The report provides useful information on federal Inspectors General (IG) efforts to meet oversight and reporting responsibilities under the Digital Accountability and Transparency Act of 2014 (DATA Act). As such, we believe the report will contribute to a greater understanding of the oversight work performed by the IG community and of agency efforts to report and track government-wide spending more effectively.
We appreciate the professionalism and cooperation demonstrated by the GAO staff during the engagement. Should you have questions regarding these comments, or if we can provide any additional information, please contact Mark Jones at 202-292-2600.
Sincerely, Tom Howard Chair, Audit Committee, CIGIE Inspector General, Amtrak
cc: The Honorable Michael E. Horowitz Chair, CIGIE Inspector General, U.S. Department of Justice
Allison Lerner Vice Chair, CIGIE Inspector General, National Science Foundation
1717 H Street, NW, Suite 825, Washington, D.C. 20006

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact	Paula M. Rascona, (202) 512-9816 or rasconap@gao.gov
Staff Acknowledgments	In addition to the contact named above, Michael LaForge (Assistant Director), Diane Morris (Auditor in Charge), Umesh Basnet, Thomas Hackney, and Laura Pacheco made major contributions to this report. Other key contributors include Dave Ballard, Carl Barden, Maria Belaval, Jenny Chanley, Patrick Frey, Ricky Harrison, Jason Kelly, Jason Kirwan, Quang Nguyen, Samuel Portnow, Carl Ramirez, Anne Rhodes-Kline, and Dacia Stewart.

Related GAO Products

DATA Act: OMB, Treasury, and Agencies Need to Improve Completeness and Accuracy of Spending Data and Disclose Limitations. GAO-18-138. Washington, D.C.: November 8, 2017.

DATA Act: As Reporting Deadline Nears, Challenges Remain That Will Affect Data Quality. GAO-17-496. Washington, D.C.: April 28, 2017.

DATA Act: Office of Inspector General Reports Help Identify Agencies' Implementation Challenges. GAO-17-460. Washington, D.C.: April 26, 2017.

DATA Act: Implementation Progresses but Challenges Remain. GAO-17-282T. Washington, D.C.: December 8, 2016.

DATA Act: OMB and Treasury Have Issued Additional Guidance and Have Improved Pilot Design but Implementation Challenges Remain. GAO-17-156. Washington, D.C.: December 8, 2016.

DATA Act: Initial Observations on Technical Implementation. GAO-16-824R. Washington, D.C.: August 3, 2016.

DATA Act: Improvements Needed in Reviewing Agency Implementation Plans and Monitoring Progress. GAO-16-698. Washington, D.C.: July 29, 2016.

DATA Act: Progress Made but Significant Challenges Must Be Addressed to Ensure Full and Effective Implementation. GAO-16-556T. Washington, D.C.: April 19, 2016.

DATA Act: Data Standards Established, but More Complete and Timely Guidance Is Needed to Ensure Effective Implementation. GAO-16-261. Washington, D.C.: January 29, 2016.

DATA Act: Progress Made in Initial Implementation but Challenges Must be Addressed as Efforts Proceed. GAO-15-752T. Washington, D.C.: July 29, 2015.

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