

THE DATA ACT

Vision & Value

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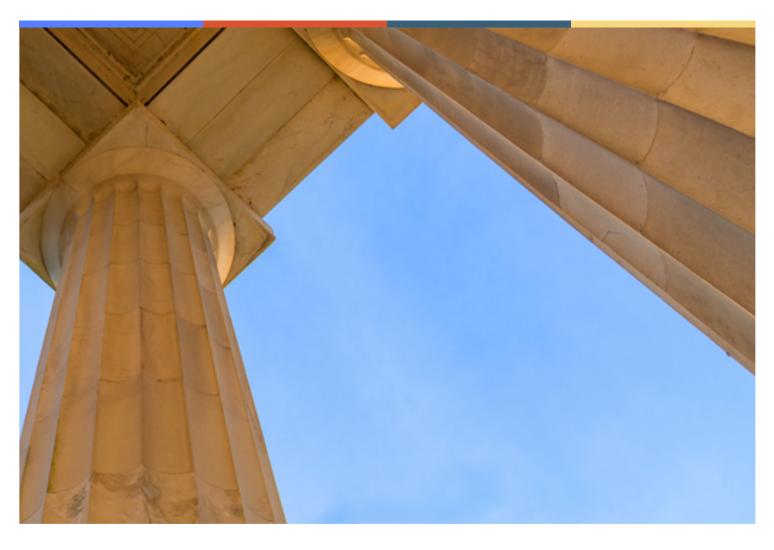
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I. Executive Summary

What Is the DATA Act? The Digital Accountability and Transparency Act of 2014 (DATA Act) seeks to transform how spending for the largest, most complex organization in human history—the U.S. federal government—is collected, tracked, and used. First introduced in June 2011 by Rep. Darrell Issa and Sen. Mark Warner, the DATA Act was passed unanimously by Congress and signed into law by President Barack Obama on May 9, 2014.

The DATA Act sets the government on an aggressive schedule to accomplish two basic tasks: first, apply standard data elements and a government-wide data format to all federal spending information and, second, publish all spending information as a unified open data set.

By applying government-wide data standards to all federal spending information and publishing it as open data, Issa and Warner hoped to make such information electronically searchable and useful for citizens, agencies, government watchdogs, and recipients of federal funds. Issa and Warner also wanted to find a way to help recipients automate their grant and contract reporting.

How Does the DATA Act Work? The DATA Act amends the Federal Funding Accountability and Transparency Act of 2006 (FFATA), which required the federal government to set up the first spending data portal, USASpending.gov, which publishes details on every grant and contract award. The DATA Act requires the government to expand this portal to publish non-award spending as well.

The DATA Act directed the Treasury Department and the White House Office of Management and Budget (OMB) to establish, by May 9, 2015, standard data elements and a government-wide format for all federal spending information. Agencies must begin reporting their financial and award data using this data structure by May 9, 2017.

To test the potential of data standards to allow recipients of grants and contracts to automate their compliance tasks, the DATA Act directs OMB to conduct a pilot program, in which recipients are invited to submit their reports electronically. The pilot program must end by May 9, 2017, at which point OMB must decide whether to impose data standards across all grant and contract reporting.

Who Benefits From the DATA Act? The American people will benefit from the DATA Act through clear views of how their government is spending their tax dollars. Agencies will benefit from new enterprise-wide views of their own spending and from matching spending to performance on a program-by-program level. Watchdogs—inspectors general, the Government Accountability Office (GAO), and Congress—will derive new insights into spending patterns and deploy government-wide data analytics to fight fraud, waste, and abuse. In addition, recipients will benefit from additional insights into

competition for grants and contracts and automated, simpler approaches to compliance with reporting requirements.

Why Does the DATA Act Matter? Through open data, the DATA Act promises to automate many tasks that are manual today, such as tracking federal spending through the life cycle, analyzing program spending across all of an agency's divisions, uncovering fraudsters, and reporting on grants. The DATA Act means increased accountability, better performance, and more efficiency. These changes are good for Americans, their government, and their society.

II. What Is the DATA Act?

The DATA Act's journey to passage and the actions it requires of the Treasury Department, the White House, agencies, and recipients of federal awards are summarized in Figure 1. This section tells the whole story.

On May 9, 2014, with President Barack Obama's signature, the Digital Accountability and Transparency Act [1] became law. Its enactment completed a legislative journey of nearly three years, beginning with Rep. Darrell Issa and Sen. Mark Warner's introduction of their first version in June 2011. [2]

From the start, Issa, Warner, and their co-sponsors sought to standardize and publish federal spending information. They believed government-wide standardization could unify disparate financial and award data into a single, complete, searchable data set. [3] They wanted to publish this unified spending data set online so everyone—citizens, agencies, watchdogs, and recipients of federal funds—could download and use it. [4]

Issa and Warner's goals were based on the success of data standardization and publication within the federal stimulus program several years earlier. The American Recovery and Reinvestment Act of 2009 (Recovery Act) directed \$800 billion in spending to stimulate the nation's economy, including approximately \$275 billion in awards of contracts and grants (and other types of assistance, such as loans). [5] The Recovery Act required recipients of these stimulus awards to file special transparency reports with a temporary oversight agency, the Recovery Accountability and Transparency Board (Recovery Board). [6]

The Recovery Board adopted government-wide data standards for stimulus recipients' reports. As a result, the reports (though they covered awards issued by many different agencies) became a single, searchable data set. [7] The Recovery Board published the data set on a public website, Recovery.gov, so citizens, agencies, watchdogs, and the recipients themselves could download and use it. Recovery.gov earned praise for its accuracy and usefulness. [8]

Figure 1:

DATA Act Timeline

May 9, 2014 V Feb. 17, 2009 V June 2011 ✓ April 16, 2012 ✓ April 2014 √ Sept. 26, 2006 √ May 21, 2013 ✓ Rep. Darrell Issa introduces the President George W. Bush signs the President Barack Obama signs the The Data Transparency Coalition Rep. Issa (with Rep. Elijah Both the Senate and the House President Obama signs the DATA Act into law. The DATA Act (official text) DATA Act in the House of Rep-(later renamed the Data Coalition) Cummings) and Sen. Warner (with pass the DATA Act. Federal Funding Accountability and American Recovery and Reinvest-Transparency Act of 2006 (FFATA) ment Act (ARRA) into law, directing resentatives, and Sen. Mark Warner announces its launch. Sen. Rob Portman) simultaneously amends FFATA by adding new requirements for government-wide into law. The Digital Accountability the government to spend over \$275 introduces the DATA Act in the reintroduce new versions of the DATA Act in both the House and spending data standards, full and Transparency Act (DATA Act) billion on stimulus contracts, grants, Senate. will later amend FFATA. and other awards. The standard-Senate. The Senate version publication of all spending data, and ization and publication of stimulus ultimately becomes law. a pilot program to test standards for award recipients' reports provided a grant and contract recipients. model for the DATA Act. April 29, 2016 √ Jan. 27. 2016 √ July 29, 2015 ✓ May 8, 2015 √ April 19, 2016 ✓ May 9, 2015 🗥 Dec. 3. 2014 V Treasury publishes the complete The Data Transparency Coalition The DATA Act's Section 5 pilot Treasury and OMB announce a first, Two subcommittees of the House Two subcommittees of the House The House Committee on Oversight version of government-wide data Committee on Oversight and changes its name to the Data Committee on Oversight and program begins for grant recipi incomplete version of governmentand Government Reform holds the standards for federal spending. Government Reform hold the third Coalition and founds a sister Government Reform hold the managed by HHS, on the DATA wide data standards for federal first Congressional DATA Act imple-OMB publishes additional guidance Congressional DATA Act impleorganization, the Data Foundation, second Congressional DATA Act Act's deadline. However, OMB fails spending, one day before the DATA mentation hearing. Act's deadline. OMB publishes for federal agencies on how to mentation hearing. a 501(c)(3) research organization. implementation hearing. to start a Section 5 pilot program for implement the data standards. contract recipients. guidance to federal agencies. Nov. 8, 2016 May 8, 2017 May 9, 2017 Aug. 7, 2017 Nov. 8, 2017 May 9, 2018 Aug. 7, 2018 Deadline: OMB must submit a Deadline: Each agency inspector Deadline: All agencies must **Deadline:** Section 5 pilot program **Deadline:** The GAO must issue a **Deadline:** Treasury and OMB begin reporting their spending report to Congress on the results report assessing the completemust publish all spending data on to test standardized reporting by data using the government-wide grantees and contractors must of the Section 5 grantee and ness, timeliness, accuracy, and USASpending.gov, under sub-

general must issue a report assessing the completeness, timeliness, accuracy, and quality of its agency's spending data plus its agency's implementation and use of data standards, with additional reports in 2018 and 2020, under paragraph 6(a)(2) of FFATA (as added by the DATA Act).

data standards, under paragraph 4(c)(2) of FFATA (as added by the DATA Act).

end, under paragraph 5(b)(5) of FFATA (as added by the DATA contractor reporting pilot program, under paragraph 5(b)(6) of FFATA (as added by the DATA Act).

quality of all agencies' spending data plus their implementation and use of data standards, with additional reports in 2019 and 2020, under paragraph 6(b)(2) of FFATA (as added by the DATA Act).

section 3(a) of FFATA (as added by the DATA Act).

Deadline: OMB must decide whether to impose DATA Act standards on all grantee and contractor reporting, under paragraph 5(b)(7) of FFATA (as added by the DATA Act).

Stakeholders Key



Agencies



Watchdogs



The Recovery Board also set up a data platform, known as the Recovery Operations Center (ROC), to uncover and pursue indications of fraud. The ROC combined the public recipient report data set with other federal spending data, such as the Social Security Administration's Master Death File, and allowed each agency's inspector general to analyze the data. Audits and investigations supported by the ROC are reported to have saved more than \$157 million in fraud recovery or prevention. [9]

Issa and Warner were looking to address criticisms of the federal government's primary spending transparency website, USASpending.gov. [10] USASpending.gov, established in 2006 by the Federal Funding Accountability and Transparency Act, [11] published a summary of every federal grant and contract. However, reports by the Government Accountability Office and the nonprofit Sunlight Foundation lambasted the site's data. [12] In addition, FFATA exempted certain transactions, and the website only published grant and contract awards, ignoring the approximately two-thirds of federal spending going toward salaries, entitlements, and other non-award uses. Finally, USASpending.gov reported the obligated value of each award but did not track the amounts actually paid out. Issa and Warner wanted to create a reliable data set covering all federal spending and allowing users to track spending decisions from appropriation to disbursement. [13]

Issa and Warner believed that unifying federal spending into a single data set and publishing it for free use would benefit Americans and their government in myriad ways. This government-wide version of the Recovery Board's approach [14] would result in better transparency for citizens, [15] useful internal management tools for agencies, [16] anti-fraud analytics for watchdogs, [17] and automated compliance for grantees and contractors. [18]

Issa and Warner's original vision took several forms during its three-year journey to enactment. [19] The original DATA Act would have turned the Recovery Board into a permanent oversight body, the Federal Accountability and Spending Transparency Board (FAST Board), empowered to collect standardized spending information from agencies and recipients and publish it all as a unified data set. [20] Agencies and recipients would have had to report standardized data to the FAST Board on top of their other reporting requirements. [21]

After facing opposition from Senate Republicans on the notion of forming a new agency and new reporting requirements, Issa and Warner changed their approach. [22]

As enacted, the DATA Act did not set up a new agency, nor did it impose new reporting requirements on agencies or recipients. Rather, the DATA Act granted new authority to the Treasury Department and the White House Office of Management and Budget. [23] Instead of setting up new standardized reporting requirements, it sought to impose standard data elements and a government-wide format across the existing financial and award reporting. [24]

Issa and Warner's modified vision still faced opposition from the White House, which

sought to weaken its mandates for data standardization and publication. [25] However, Issa, Warner, and their co-sponsors insisted on maintaining these basic goals. [26] Both houses of Congress unanimously approved the final version of the DATA Act in April 2014, [27] sending it to President Obama, who quietly signed it on May 9, 2014. [28]

III. How Does the DATA Act Work?

Technically, the DATA Act amended FFATA, the 2006 law that set up USASpending.gov. It expanded FFATA to create government-wide data elements and a government-wide format across all spending; apply those standards to all agencies' budget, accounting, and award information; involve inspectors general and GAO to ensure the standards are applied; and create a pathway to eventually transform award recipients' reports into standardized data as well. This section explains how.

A. Establishing Data Standards & Expanding Transparency

The DATA Act added a brand new section to FFATA, Section 4, directing Treasury and OMB to establish data standards "for any Federal funds made available to or expended by Federal agencies and entities receiving Federal funds." [29] These data standards must include government-wide data elements, such as consistent electronic identification codes for awards of federal funds and for the contractors, grantees, and other recipients who receive the funds. [30] Treasury and OMB also must establish a government-wide data format that explains how the elements relate to one another. [31]

Treasury and OMB were required to establish these data standards no later than one year after the law's enactment: May 9, 2015. [32] Treasury and OMB announced their first tranche of data elements a day early, on May 8, 2015. [33] However, this first announcement did not include a format specifying how the elements would relate to one another. Treasury issued the complete format, known as the DATA Act Information Model Schema (DAIMS), on April 29, 2016. [34] OMB followed up a few days later with guidance describing how agencies will phase in the elements and format. [35]

Before the DATA Act became law, Section 2 of FFATA required USASpending.gov to publish details on every federal contract, grant, and assistance award. [36] To expand this data set to cover all federal spending information, not just award details, the DATA Act added Section 3 to FFATA. [37] Section 3 required USASpending.gov to publish every federal appropriations account, break down obligations and outlays, and publish similar breakdowns by object class and program activity. [38] The combined impact of Sections 2 and 3, after the DATA Act's changes, was to require a unified data set that describes all the major spending categories and actions and how they relate to one another. [39] The DATA Act set a deadline for USASpending.gov to carry all this new information: three years after enactment, or May 9, 2018. [40]

The new USASpending.gov must publish all spending information as open data: machine-readable and freely available in bulk. [41]

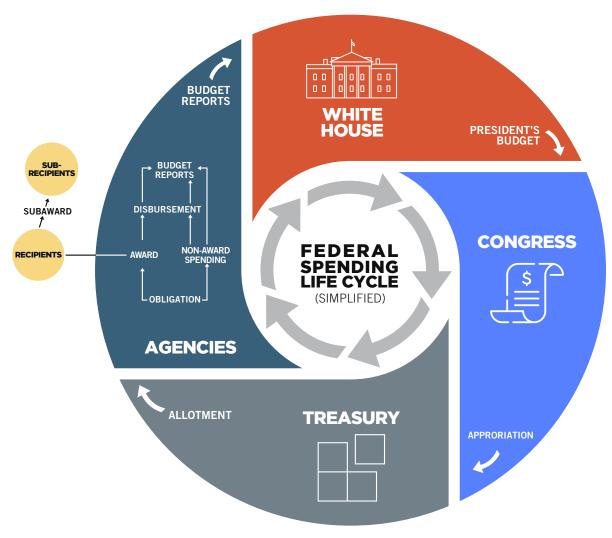
In advance of the May 9, 2018, deadline, OMB and Treasury agreed that Treasury would manage and upgrade USASpending.gov. [42] In October 2015, Treasury published an experimental website to begin publicly testing new visualizations and uses for spending data, OpenBeta.USASpending.gov. [43] OpenBeta.USASpending.gov allows users to offer feedback on spending data sets and methods of displaying them. Treasury publishes data sets and experimental visualizations on OpenBeta.USASpending.gov, solicits stakeholders' views, and uses these views to inform the design of the expanded USASpending.gov. [44]

Another useful way to understand the expansion of USASpending.gov is to view federal spending as a "life cycle" (Figure 2). Congress appropriates federal funds; Treasury executes appropriations laws by allotting funds among thousands of accounts; agencies obligate funds to particular programs; some funds are awarded to recipients via contracts, grants, and other types of awards; final payments are disbursed; and some recipients award sub-contracts or sub-grants to sub-recipients. Agencies summarize all these activities in their budget reports, which become the basis for the President's annual budget and future Congressional appropriations.

At each stage of the life cycle, a different entity (Congress, Treasury, agencies, recipients, or the White House) is responsible for tracking spending activities. At each stage, funds are separated and combined. For example, a particular program may receive funds from more than one appropriation, and a single appropriation often funds multiple programs. The complexity of the life cycle makes it very difficult to track funds across stages.

However, the DATA Act's standards offer a way to model the stages of the life cycle electronically. A January 2016 GAO report confirms that, if successful, the DATA Act will ultimately "allow funds to be tracked at multiple points in the federal spending lifecycle." [45] Treasury's ultimate goal for USASpending.gov is for the website to depict electronically the entire life cycle, from appropriation to disbursement. [46]

Figure 2: Federal Spending Life Cycle



B. Standardizing Agencies' Spending Reports

Federal agencies are subject to a dizzying array of reporting requirements for their spending. These requirements are often grouped into three broad categories. First, since the Constitution set up a system of divided powers, with Congress appropriating federal funds to be spent by agencies, [47] the executive branch has tracked and reported cash-based budgets, agency by agency. Budget reports today are managed by OMB's MAX system. Second, starting with the Chief Financial Officers Act of 1990 (CFO Act), most large agencies must also report accrual-based accounting data, publish financial statements, and undergo audits. Treasury collects and aggregates agencies' accounting information and publishes financial statements for the whole government. Third, FFATA and the Recovery Act both focus on the award of federal funds through contracts, grants, and other assistance. Agencies report their grants to the Federal Assistance

Awards Data System (FAADS) and their contracts to the Federal Procurement Data System (FPDS). These three categories of spending reports cover overlapping information, yet they are managed by different and usually non-integrated information technology systems.

Even for experts, the relationships between the three different categories of spending information can be obscure. The DATA Act represents the first attempt to unify all three categories into a single data structure.

The DATA Act requires all agencies [48] to begin reporting standardized spending information no later than two years after enactment: May 9, 2017. [49] Treasury's DATA Act Information Model Schema specifies the technical details of how agencies must do this: at biweekly and quarterly intervals, they must upload specified data files. [50] At least at first, agencies' obligations to simultaneously report the same information to pre-existing systems—MAX, Treasury systems, FAADS, FPDS, and others—will continue. This means that agencies will be reporting the same information twice: once as standardized data, then again as non-standardized reports to the legacy systems. Advocacy groups have called on Treasury and OMB to plan for the legacy systems' retirement and for an end to duplicative reporting once standardized reporting is well underway. [51]

The DATA Act's mandate for agencies to begin reporting standardized spending information is its central challenge for the federal government. If agencies successfully assemble their budget, accounting, and award information and then translate it into the DAIMS, assemble the specified data files, and send them to Treasury, the DATA Act's vision of a unified data set will become real. If they do not, the DATA Act will have failed to achieve its purpose.

C. Ensuring Watchdogs' Oversight

To reinforce its mandates, [52] the DATA Act set up a system of reviews and reports by agencies' inspectors general and by GAO.

- Eighteen months after Treasury and OMB establish data standards—no later than November 8, 2016—the inspector general of each agency must report to Congress on its agency's progress toward reporting complete, timely, high-quality, and accurate spending data. [53]
- Thirty months after Treasury and OMB establish data standards—no later than November 8, 2017—GAO must issue a report to Congress assessing and comparing the same benchmarks—completeness, timeliness, quality, and accuracy—across all agencies' reported spending data. [54]
- Inspectors general must report twice more on the completeness, timeliness,

quality, and accuracy of their agencies' data: once in 2018 and again in 2020. These later reports can be included as part of the financial statement audits that inspectors general perform under other laws. [55]

• GAO must also report twice more: once in 2019 and again in 2021. [56]

Aside from its required activities, GAO has performed multiple audits and investigations at Congress' request and at its own initiation. [57] Congress has chosen to scrutinize the implementation as well. The House Oversight Committee has held three DATA Act hearings since enactment of the law. [58] Meanwhile, several Senators have sent letters to Treasury, OMB, and agencies asking for details on their implementation challenges. [59]

D. Transforming Recipient Reporting

Issa and Warner noticed that the Recovery Board's decision to apply government-wide data standards to stimulus recipients' special reports allowed some recipients to use software to automate those reports' preparation and submission. [60] For these recipients, automated reporting was faster and cheaper than manually compiling and submitting document-based reports.

The Recovery Board conducted a small pilot program to determine whether this approach, if adopted for all grants, could reduce grantees' total compliance costs. [61] The pilot program's results suggested that standardizing recipient reporting data elements and formats could indeed reduce compliance costs through automation. [62]

Accordingly, the DATA Act added Section 5 to FFATA, requiring OMB to conduct a government-wide pilot program to test this idea on a much larger scale. [63]

Section 5 directs OMB, or another agency appointed by OMB, to invite recipients to submit standardized electronic versions of their reports over a 12-month period. [64] The pilot program must be complete by May 9, 2017. Within 90 days, OMB must report to Congress on whether the use of standardized data successfully reduced recipients' reporting costs. [65] OMB must decide no later than August 2018 whether to standardize all recipient reporting. [66]

The DATA Act's ultimate goal for recipient reporting is to enable software providers to create a TurboTax-like application for grants and contracts, simplifying the challenge of compiling and submitting the vast range of reports for which recipients are responsible. [67]

OMB decided to divide the Section 5 pilot program into two distinct programs: one to test standardized reporting for grants (and other forms of assistance) and another to test standardized reporting for contracts. [68] In December 2014, OMB appointed the Department of Health and Human Services (HHS) to manage the grant reporting program. [69] OMB has not designated an agency to manage the contract reporting pilot

program; instead, OMB has testified that several agencies are working together on contract reporting. [70]

HHS set up a DATA Act Program Management Office (DAP) to run its assigned pilot program. [71] The DAP has invited thousands of grantees to join the program [72] and published a data dictionary of more than 4,000 data elements used in grant reports, known as the Common Data Element Repository (CDER) Library. The CDER Library includes the government-wide data elements established in 2015 by Treasury and OMB as well as thousands of data elements that are unique to grant reports. [73] The DAP has created six test models to test the hypothesis that if grantees are allowed to submit their reports as electronic files, using the data elements of the CDER Library, they will be able to automate compliance tasks, reducing their costs. [74]

Meanwhile, GAO and Congressional leaders have noted that little progress has been made on the contract side. [75]

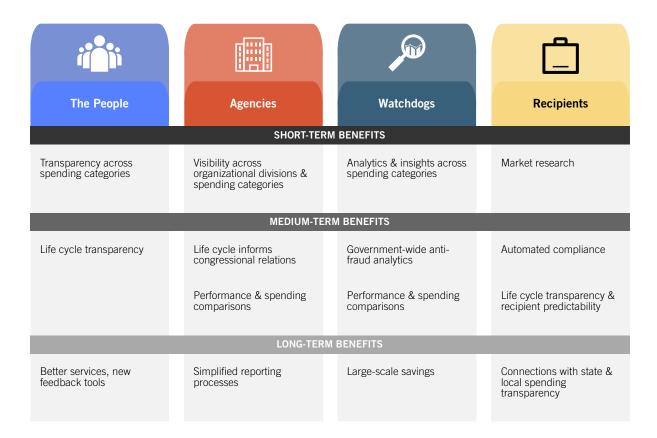
IV. Who Benefits From the DATA Act?

By setting up government-wide data standards, the DATA Act promises to unify federal spending information into one data set. By publishing that data set for free access and bulk download, the DATA Act promises to create one of the world's most valuable public information resources. [76]

Citizens, agencies, watchdogs, and recipients will all derive transformative benefits from access to a unified federal spending data set. In addition, if the Section 5 pilot program succeeds, recipients will be able to use a new standardized data infrastructure to automate and consolidate many compliance tasks that are performed manually today.

This section identifies the DATA Act's beneficiaries and explains when and how the benefits will reach them (Figure 3).

DATA Act Benefits



A. For the People: Data-Driven Transparency

The U.S. Constitution provides that "a regular Statement and Account of the Receipts and Expenditures of all public Money shall be published from time to time." [77] However, for decades, American taxpayers and the advocates and journalists serving them have complained that they are unable to follow what is being done with their money.

Citizens, advocates, and journalists do have access to published appropriations laws, federal financial statements, [78] and, since 2006, USASpending.gov details on grants and contracts. Why, then, are calls for transparency and accountability still common in the media and in Congress?

Short-term: Transparency across spending categories.

Part of the answer lies in the disconnect between cash-based appropriations, accrual-based financial statements, and grant- and contract-focused award data. Without

professional assistance, manual research, or both, it is impossible to put these three sources of information in context with one another. However, the DATA Act's comprehensive data structure promises to bring these three disparate categories of federal spending information together as a unified open data set.

What will this data set look like? We do not know yet. Treasury is experimenting with new ways of depicting the connections across appropriations, financial concepts, and awards. [79] Moreover, the private sector will surely come up with additional ways to view the connections.

Until fiscal year 2010, the Census Bureau's Federal Financial Statistics program published an annual Consolidated Federal Funds Report (CFFR), a document summarizing the impact of all federal spending, including both award and non-award spending by state and local jurisdiction. The DATA Act, if successful, may create a dynamic, electronic version of the defunct CFFR.

Medium-term: Life cycle transparency.

The opacity of the federal spending life cycle may be another source of frustration. Even policy professionals have difficulty tracing taxpayer dollars from appropriation to allocation, obligation, award, final disbursement, and (sometimes) subaward. For private citizens, the task is impossible. The DATA Act can set the stage for standardizing and publishing the full life cycle.

The DATA Act does not require every stage of the life cycle to be standardized and published. For example, the law does not impose data standards on the President's annual budget proposals, nor does it require Congressional appropriations committees to use standardized elements and formats for the appropriations bills they prepare. To deliver full life cycle transparency, the President and Congress must choose to connect these early stages of the spending life cycle—budgets and appropriations bills—to the DATA Act's data structure.

In addition, the DATA Act does not require that data on final payments be standardized and published. Treasury processes most payments the government makes and has previously promised Congress that it will eventually publish its Payment Information Repository, [80] but payment publication is not part of Treasury's current DATA Act implementation project. The DATA Act's initial data set will aggregate the total amount of outlays by account, object class, and program activity, [81] but it will not provide details at the payment level.

However, by standardizing and publishing a unified open data set covering most of the federal spending life cycle, the DATA Act will lay a foundation for the policy changes necessary to standardize and publish the rest. Advocates for transparency will encourage the White House and Congress to connect electronic versions of budget proposals [82] and appropriations laws, respectively, to the DATA Act's data structure. Treasury is well-positioned to connect payments to the DATA Act standards as well.

Once the necessary policy and technical changes are made, and once the full spending life cycle is electronically accessible, citizens will gain a powerful tool for engaging with policymakers. One can imagine a citizen confronting a member of Congress about how federal funds meant for streets or schools in their home district are being spent: "You voted for this appropriation in committee. The money was allotted to this agency, obligated for that particular purpose, awarded to this grantee, and ultimately paid to this sub-grantee in my hometown under unclear terms, and the work did not get done." Such conversations will empower citizens. Life cycle transparency will incentivize strong legislative oversight.

Long-term: Better services, new feedback tools.

If the DATA Act succeeds in improving federal agencies' management, empowering watchdogs' oversight, and automating recipients' reports (as described in the following sections), the American people will be the ultimate beneficiaries. Improved efficiency and reduced fraud will mean making more resources available for programs' purposes. Automated reporting will eliminate recipients' compliance tasks and leave staff time open for front-line work. For all these reasons, government services will improve independent of funding levels.

In addition, the DATA Act's government-wide elements and format will prove useful beyond their immediate application in federal spending. For the first time, the federal government will have official, near-universal identification codes for such concepts as agency, [83] award, recipient, and program. [84] These standards can be used in new citizen feedback mechanisms. Ultimately, the federal government could become as sophisticated in tracking and responding to user experience as leading social media platforms and electronic commerce companies are today.

B. For Agencies: Data-Driven Management

For most agencies, spending information is siloed among different divisions, bureaus, programs, and regional offices. Consider, for example, the challenges of monitoring spending at the Department of Homeland Security (DHS), which was created by combining parts of 22 different federal agencies, each with their own financial and award systems.

For most agencies, spending information is also siloed across categories. Most agencies use financial systems to track budget- and accounting-related activity but handle awards separately, using specialized contract- and grant-writing systems. This fundamental divide between financial and award systems makes it difficult for agency leadership to retrieve award information related to a particular financial activity or, vice versa, access financial information related to a particular award.

Some federal agencies have expensively integrated their financial and award systems to

allow chief financial officers to access spending information across these organizational and categorical divides—but most have not.

Short-term: Visibility across organizational divisions and spending categories.

By standardizing all spending information and collecting it as a unified data set, the DATA Act will immediately deliver agency-wide insights that are most beneficial to chief financial officers but also useful to other leaders.

In 2015, the Small Business Administration's (SBA) early DATA Act work proved this immediate value. Working with Treasury and the General Services Administration's (GSA) 18F technology team, the SBA organized information from its existing spending systems —financial, grant writing, and contract writing—to match the corresponding DATA Act fields and formats. [85] By doing so, the agency created a data set that connects every grant and contract award to the financial information—account, object class, and so on —to which it corresponds.

As a result, the SBA chief financial officer can now see past program-level aggregations into award-specific details without the tedious, manual process of requesting and compiling data from various program offices. The CFO and other agency leaders can analyze award characteristics across all programs for the first time. The DATA Act standards also offer financial officers a way to retain visibility after handing financial management over to a shared services center at a different agency.

Medium-term: Life cycle informs Congressional relations.

Agencies frequently complain that Congressional spending directives carry unintended consequences. Congress is known to both appropriate spending on new programs without taking existing programs into account and restrict spending in ways that frustrate its own stated goals. These problems are a result, in part, of the complexity of the federal spending life cycle.

The full standardization and publication of the spending life cycle—making the life cycle jointly understandable by agencies and Congress—offers a way forward for relations between the two branches.

If the government takes the remaining steps necessary to standardize and publish the full life cycle of federal spending (as described in the previous section), agencies will be able to predict the impacts of Congressional decisions on their operations, programs, and awards and instantly share those predictions with Congress.

Medium-term: Performance and spending comparisons.

The Government Performance and Results Act Modernization Act of 2010 (GPRAMA) required OMB to create and maintain an inventory of federal programs. [86] Performance reporting across the government is tied to this inventory. [87]

GAO has recommended that OMB align the program inventory with the DATA Act's data structure to allow spending and performance to be tracked against one another on a program-by-program basis. [88] If OMB is able to accomplish this feat, agencies will gain an automatic means of comparing their programs' performance metrics to the investment in them, over time, across the enterprise and across the whole government. Agencies will also benefit from the ability to automatically identify the resources being invested in overlapping or duplicative programs.

Long-term: Simplified reporting processes.

The DATA Act sets up, at least temporarily, a duplicative reporting regime for agencies' spending information. [89] Beginning in May 2017, agencies will begin reporting standardized spending data under the DATA Act while continuing to report non-standardized spending information to legacy systems at Treasury, OMB, and GSA.

However, over time, Treasury and OMB will have the opportunity to retire the legacy systems. As the DATA Act reporting regime becomes the primary, and eventually the only means by which agencies report their spending, opportunities to consolidate data fields and automate compliance will grow.

C. For Watchdogs: Data-Driven Analysis

The federal government's watchdog institutions—Congress, GAO, and each agency's inspector general—need reliable, searchable data on federal spending in order to perform their work. Until DATA Act reporting begins, they lack such data.

The lack of reliable, standardized spending data causes GAO difficulty in assessing the effectiveness of government operations. [90] Since before its passage, GAO has recognized that "[t]he DATA Act responds to our recommendation to legislate transparency requirements, including data standards and clear authority for implementation." [91]

Short-term: Analytics and insights across spending categories.

Interagency payments, which are tracked differently by different agencies, have long represented one of the main obstacles to federal audits. Comptroller General Gene Dodaro has testified that by imposing government-wide data standards, the DATA Act will allow the U.S. government to track such payments accurately, leading to clean audits of federal financial statements. [92]

Inspectors general frequently employ analytical tools to aid audits and identify grants and contracts most at risk for fraud—and most deserving of human investigators' limited time. One example is the Risk Assessment Data Repository (RADR) used by the U.S. Postal Service Office of the Inspector General (USPS OIG). RADR ingests the Postal

Service's internal financial and contracting data [93] and assigns a risk score showing the likelihood that fraud is occurring on a given contract, based on red flags such as frequent contract modification and unevenly spaced payments. In a similar way, RADR uses the Postal Service's internal human resources data, combined with Department of Labor data sets, to evaluate the risk of employee health care benefits fraud. The USPS OIG recovered approximately \$300,000 in fraudulent payments almost immediately after deploying RADR and, within less than a year, it had used RADR to achieve "\$11 million in recoveries, restitutions and cost avoidance in workers' compensation health care fraud." [94]

Among the most challenging issues facing the deployment of systems like RADR is the fact that most agencies' financial and award systems are separate from one another. RADR only works because the USPS OIG is able to automatically match a given contract with the payments made under it. However, at many other agencies, such a match requires manual research.

The DATA Act standards match financial information to award information across systems, meaning that once the standards are applied, inspectors general will have an automatic means to make the connections that systems like RADR depend on. Once each agency is reporting its spending information, including financial and award information, using the DATA Act elements and formats, each inspector general will be able to deploy systems like RADR at less cost and with greater immediate return.

Congressional oversight committees rely on document requests and manual reviews to investigate federal agencies' spending. The DATA Act promises that at least some of the information Congressional staffers must piece together from manual document review will soon be available instantly, as searchable data.

Medium-term: Government-wide anti-fraud analytics.

As noted previously, the DATA Act is based on the experiences of the Recovery Accountability and Transparency Board, the temporary agency Congress set up to oversee stimulus spending mandated by the Recovery Act. [95] The Recovery Board imposed a consistent data format across all Recovery spending reports. Just as the Recovery Board's decision to standardize data allowed stimulus spending to be expressed as a single, searchable data set, the DATA Act will unify all federal spending into a single, searchable data set.

This will allow a hypothetical DATA Act Operations Center to deploy analytics to scrutinize all spending—or at least all spending on contracts, loans, and other assistance awards—representing an annual \$2.8 trillion. [96] If the DATA Act Operations Center were to match the ROC's performance, it could recover up to \$1.6 billion per year from fraud, waste, and abuse. [97] Such savings will only be possible if Congress chooses to create such a government-wide analytics platform.

Although watchdog institutions enjoy greater access to federal spending information than citizens do, they still typically lack the resources to understand the contortions of the federal spending life cycle. As a result, they are unable to track or verify facts across multiple stages of the life cycle. For example, when Congress attaches conditions to a particular appropriation, watchdog institutions are unable to automatically view the spending decisions associated with that appropriation all the way down the life cycle. For instance, it can be difficult to verify if an agency is following a Congressional condition that a particular appropriation not be spent on a given program. Consequently, watchdog institutions investigating such questions must often resort to sampling.

However, once the DATA Act standards transform federal spending information into a single data set and appropriate analytics allow users to navigate the spending life cycle, watchdog institutions will be better able to track spending across multiple stages.

Medium-term: Performance and spending comparisons.

The alignment of performance and spending reporting described above will open new opportunities for watchdogs to shepherd public resources. GAO's annual review of duplicative programs, [98] for instance, is based on sampling. [99] GAO does not have the resources to perform a complete review of all programs' purposes and spending support. If OMB manages to align its program inventory with the DATA Act's data structure, GAO will be able to automatically generate analyses to support its duplication review.

Long-term: Large-scale savings.

The federal government is on an unsustainable fiscal path. [100] Difficult choices are ahead. Congress has proposed several versions of special decision-making bodies empowered to deliver recommendations for significant reorganizations of the federal government. [101] The DATA Act promises complete, reliable data to inform these bodies and make the best of difficult choices.

D. For Recipients: Data-Driven Compliance

Short-term: Market research.

Recipients of contracts, grants, and other assistance conduct extensive research on available awards, peer and competitor award recipients, and historical award patterns. Many recipients purchase data sets, visualizations, and analyses from providers such as Govini, GovTribe, Deltek, and Bloomberg Government to supplement their own research. The unreliability and incompleteness of the existing USASpending.gov portal raise the cost of recipients' research and hamper the business models of award data providers.

The DATA Act promises to improve the quality of award data already available on

USASpending.gov through more rigorous auditing and automated verification. The law requires that inspectors general audit the accuracy of the standardized data that their agencies compile and report. In addition, by connecting previously separate financial and award information, the DATA Act's standards offer a means to automatically check the contents of separate systems against one another. Better award data will mean recipients can perform cheaper research and derive more value from data providers.

The DATA Act's expansion of the scope of publicly available spending data will also benefit recipients' research. For example, a grantee may be able to automatically view the proportion of a program's total resources represented by the grant it received and better understand the importance of the grant to the grantor agency.

Medium-term: Automated compliance.

Recipients of federal contracts, grants, and other assistance face a bewildering array of reporting requirements. Contractors must register with the Central Contractor Registry (CCR), report to various databases within the Integrated Acquisition Environment (IAE), and comply with agency-specific reporting requirements. Grantees are responsible for submitting annual reports on each grant they receive to their grantor agencies, and grantees receiving more than \$500,000 annually must also submit audit information under the Single Audit Act. [102] Under FFATA, all recipients that issue sub-contracts or sub-grants must report those sub-awards to the FFATA Subaward Reporting System (FSRS). [103] Together, these reporting regimes require recipients to invest significant time and money in compliance.

If recipients could report this information through data feeds rather than document-based forms, software could automate many processes that are manual today. The DATA Act's government-wide data standards provide the necessary foundation for a standardized structure for contractors', grantees', and other recipients' required reports. As described previously, OMB has appointed the Department of Health and Human Services to test standardized reporting by grantees. HHS has built the first version of its CDER Library, a federal-wide repository of grant reporting elements, definitions, and context. [104]

The CDER Library begins with the government-wide DATA Act data elements and adds thousands of grant-specific data elements. The CDER Library forms the basis for grant reporting under the Section 5 pilot program. Under the DATA Act, OMB must choose whether to certify the CDER Library as the official data structure for all federal grant reporting. [105] If the grant reporting pilot program succeeds and OMB approves the CDER Library government-wide, software providers will be incentivized to create products that automatically generate grantees' reports.

The federal government has not yet created a data structure comparable to the CDER Library for contract reporting, and the ultimate impact for both grantees and contractors depends on OMB's future decisions. However, if the spirit of the DATA Act is followed, contractors will ultimately be able to dramatically reduce their compliance costs as well.

Medium-term: Life cycle transparency and recipient predictability.

If the federal government standardizes and publishes the full spending life cycle, recipients will be better able to determine how Congressional decisions affect them. When Congress chose to restrict spending through sequestration, [106] for instance, state governments were unable to easily determine how the legislative change would affect their portfolios of federal grants. Sequestration affected the hundreds of separate laws governing thousands of grant programs differently. To understand the impact of sequestration, state governments had to research the governing law of each grant program funding their agencies, determine how sequestration impacted those programs, and trace the effects on their own agencies' grant awards. Full life cycle transparency would have provided grantees with complex portfolios, especially state governments, with an electronic means of performing this analysis.

Long-term: Connections with state and local spending transparency.

Many state and local governments have already chosen to standardize and publish spending data, often to a greater degree of granularity than required by the DATA Act. [107] These projects require state and local governments to invent their own data structures, impairing comparability across governments. By virtue of the federal government's size and power, the DATA Act standards will become the world's most visible public sector spending data structure. If DATA Act implementation succeeds, state and local governments will have an incentive to emulate the federal data standards in building their own spending transparency platforms. Over the long term, federal, state, and local spending transparency structures will converge, creating interoperability across different levels of government finance and easy visualization of all public sector spending. Interoperability will lead to top-to-bottom spending transparency for the entire nation while still maintaining the protections of federalism.

V. Why Does the DATA Act Matter?

The DATA Act promises to automate many tasks that are manual today, such as tracking federal spending through the life cycle, analyzing program spending across all of an agency's divisions, uncovering fraudsters, and reporting on grants. These changes are good for Americans, their government, and their society.

However, these benefits are not automatic. Issa and Warner, their co-sponsors, and outside advocacy organizations invested years of effort to pass the law and then enforce it. Treasury and OMB worked to design data elements and a format that model the complexity of federal spending. HHS found funding for a new DATA Act office, which is working to make sense of hundreds of diverse grant programs and thousands of data elements.

All of this work was done without the usual incentives of politics and government. No member of Congress has raised significant campaign funds or attracted major new voting constituencies as a result of DATA Act support. The DATA Act authorized no new funds for the work directed to Treasury, OMB, agencies, and their contractors.

Instead, the DATA Act community—legislators, advocates, Treasury and OMB appointees, agency leaders, and implementers—is motivated by the vision that Issa and Warner glimpsed in 2011.

To realize all of the benefits described previously, the DATA Act community must invest even more time, money, and political capital into this critical transformative legislation.

- To create a unified open data set covering all federal spending, **agencies** must begin reporting their spending information using the DATA Act Information Model Schema by May 2017.
- To deliver automated compliance for recipients, **HHS** must complete its grant reporting pilot, **OMB** must conduct a contract reporting pilot, and **OMB** must decide to certify government-wide data standards for recipient reports.
- To allow spending data to be freely reused, **Treasury** and **OMB** must retire the proprietary DUNS Number.
- To achieve Recovery Board-style savings, **Congress** must create and fund a DATA Act Operations Center.
- To ensure that DATA Act reporting remains a priority, **Treasury** and **OMB** must sunset the legacy reporting systems made duplicative by DATA Act reporting.
- To complete a fully transparent federal spending life cycle, **OMB** must connect the President's budget to the DATA Act's data structure, **Congress** must integrate appropriations bills, and **Treasury** must standardize and publish its payments system.
- To match spending to performance, **OMB** must align its federal program inventory with the DATA Act's data structure and **agencies** must follow OMB's reporting guidance.
- Throughout coming years, **all stakeholders** must creatively search, analyze, and integrate the DATA Act's unified open data set.

If the people of the DATA Act community maintain their view of Issa and Warner's goals, we will meet and conquer these future challenges. When the DATA Act successfully transforms history's largest organization, as promised, it will demonstrate the value of

both a unified open data set and visionary leadership.

The DATA Act has become more than a law, more than a compliance exercise, and more than a technology project. It has become a pathway to a better government and a better society—if we stay committed.

Endnotes

- [1] Digital Accountability and Transparency Act of 2014, Public Law No. 113-101 (May 9, 2014) ("DATA Act"), https://www.gpo.gov/fdsys/pkg/PLAW-113publ101/html/PLAW-113publ101.htm.
- [2] Digital Accountability and Transparency Act of 2011, H.R. 2146 (introduced June 13, 2011) ("DATA Act Original House Version"), https://www.congress.gov/112/bills/hr2146/BILLS-112hr2146ih.xml; Digital Accountability and Transparency Act of 2011, S. 1222 (introduced June 16, 2011) ("DATA Act Original Senate Version"), https://www.congress.gov/112/bills/s1222/BILLS-112s1222is.xml.
- [3] Press Release, House Committee on Oversight and Government Reform, "Issa Introduces Sweeping Open Government, Spending Transparency Reforms" (June 13, 2011), https://oversight.house.gov/issa- introduces-sweeping-open-government-spending-transparency-reforms/ ("Issa Press Release") (describing intent to "collect[] all agency expenditure data and combine[] it with the recipient reported data"); Press Release, Sen. Mark Warner, "Senator Warner Introduces Federal Spending Accountability, Transparency Proposal" (June 16, 2011) http://www.warner.senate.gov/public/index.cfm?p=PressReleases&ContentRecord_id=4568ea55-837c-43dc-befe-09f8e369755d ("Warner Press Release"); DATA Act purpose no. 2 ("establish Government-wide data standards for financial data").
- [4] Issa Press Release (describing intent to "mak[e] all of the [spending] information available to the public"); Warner Press Release ("a single web-based platform to allow taxpayers and policymakers to more easily track all federal spending"); DATA Act purpose no. 1 ("disclos[e] direct Federal agency expenditures and link[] Federal contract, loan, and grant spending information to programs of Federal agencies to enable taxpayers and policy makers to track Federal spending more effectively"); Op-Ed, Rep. Darrell Issa, Sen. Mark Warner, Rep. Elijah Cummings, Sen. Rob Portman, The Hill, "The DATA Act will shed light on government spending" (December 16, 2013) ("DATA Act Sponsors' Op-Ed"), http://thehill.com/blogs/congress-blog/economy-budget/ 193262-the-data-act-will-shed-light-on-government-spending ("First, our legislation will expand the USAspending.gov site to include spending data for all federal funds—by appropriation, federal agency, program, and function. Currently, it covers only grants, contracts and other federal awards. This feature is important because there is currently no place to find and compare all government spending. The information also will be made available in downloadable, easily-accessible format. Second, the DATA Act will set government-wide financial data standards. Currently, there are no consistent standards, which makes much of the data on USAspending.gov confusing and unreliable. Without consistent data standards, taxpayers and policymakers can't compare apples to apples").

- [5] American Recovery and Reinvestment Act of 2009, Public Law No. 111-5 ("Recovery Act"), https://www.gpo.gov/fdsys/pkg/PLAW-111publ5/html/PLAW-111publ5.htm; see also Government Accountability Office ("GAO"), "Grant Implementation Experiences Offer Lessons for Accountability and Transparency" (January 24, 2014), Report No. GAO-14-219, http://www.gao.gov/products/GAO-14-219.
- [6] Recovery Act sec. 1512.
- [7] Op-Ed, Earl Devaney, The Hill, "Halfway Home to Reform: Time for Senate to Move on DATA Act" (May 22, 2012), http://thehill.com/blogs/congress-blog/technology/228873-halfway-home-to-reform-time-for-senate-to-move-on-data-act.
- [8] Andrew Prokop, Vox.com, "Beating the odds: Why one bill made it through a gridlocked Congress and so many don't" (May 22, 2014), http://www.vox.com/2014/5/22/5723878/how-a-bill-becomes-a-law-in-2014 ("Vox.com DATA Act Story") ("But Issa came to believe Recovery.gov worked. Its information was mostly accurate, searchable online, and downloadable, and the website was user-friendly").
- [9] Charles Clark, GovExec, "Historic Effort to Track Stimulus Spending Wraps Up" (September 28, 2015), http://www.govexec.com/oversight/2015/09/historic-effort-track-stimulus-spending-wraps/122129/; see also Jessica Yabsley, Data Coalition, "Open Data and Oversight: How Data Standards Empower Anti- Fraud Analytics" (April 19, 2016), http://www.datacoalition.org/open-data-and-oversight-how-data-standards-empower-anti-fraud-analytics/.
- [10] DATA Act Sponsors' Op-Ed, ("[O]ur legislation will expand the USAspending.gov site to include spending data for all federal funds—by appropriation, federal agency, program, and function. Currently, it covers only grants, contracts and other federal awards. This feature is important because there is currently no place to find and compare all government spending").
- [11] Federal Funding Accountability and Transparency Act of 2006, Public Law No. 109-282 ("FFATA"), https://www.gpo.gov/fdsys/pkg/PLAW-109publ282/html/PLAW-109publ282.htm; FFATA was amended by the Government Funding Transparency Act of 2008 to require the disclosure of recipients' executive compensation; Government Funding Transparency Act of 2008, Public Law No. 110-252, Sec. 6201, https://www.gpo.gov/fdsys/pkg/PLAW-110publ252/html/PLAW-110publ252.htm.
- [12] GAO, "Implementation of the Federal Funding Accountability and Transparency Act of 2006" (March 2010), http://www.gao.gov/new.items/d10365.pdf (finding that every award in a sample of 100 "had at least one required data field that was blank or inconsistent with agency records"); Sunlight Foundation, ClearSpending (accessed June 15, 2016), http://sunlightfoundation.com/clearspending/ (finding that the majority of all federal grant funds were misreported on USASpending.gov in fiscal years 2010 and 2011); After the passage of the DATA Act, a second GAO report revealed that agencies did not properly report approximately \$619 billion in grants and other assistance, GAO, "Oversight Needed to Address Underreporting and Inconsistencies on Federal Award Website" (June 2014), http://www.gao.gov/assets/670/664536.pdf; Unlike the Recovery Board's website, which relied on reports submitted by recipients of stimulus awards, the USASpending portal relies on reports submitted by agencies.

- [13] DATA Act Sponsors' Op-Ed ("spending data for all federal funds") (emphasis added).
- [14] DATA Act purpose no. 5 ("apply approaches developed by the Recovery Accountability and Transparency Board to spending across the Federal Government").
- [15] DATA Act purposes nos. 1 and 2.
- [16] DATA Act Sponsors' Op-Ed ("the DATA Act will make other efforts to enhance transparency-through- technology, like the President's Open Data Policy and the modernization of the Government Performance and Results Act, truly useful").
- [17] DATA Act purpose no. 5.
- [18] DATA Act purpose no. 3.
- [19] In addition to the versions originally introduced in the House and Senate in June 2011 (H.R. 2146 and S. 1222, respectively), the DATA Act was re-introduced in substantially modified form in the Senate on September 20, 2012 (S. 3600) and then re-introduced simultaneously in both chambers for the new 113 th session of Congress on May 21, 2013 (H.R. 2061 and S. 994, respectively); S. 994 ultimately became law.
- [20] DATA Act Original House Version and DATA Act Original Senate Version at Title II.
- [21] Agencies report their financial information to the Governmentwide Treasury Account Symbol Adjusted Trial Balance System ("GTAS"), maintained by the Treasury Department; most agencies also request payments through various processing systems maintained by the Treasury Department; agencies submit budget information to the Office of Management and Budget ("OMB") via OMB's MAX system; agencies report their contract awards to the Federal Procurement Data System, maintained by the General Services Administration ("GSA"); agencies report awards of grants and other assistance to the Federal Assistance Awards Data System, maintained by the Treasury Department; recipients report to a wide variety of agency-specific systems, plus (for contractors) the Integrated Acquisition Environment at the GSA, (for grantees) the Federal Audit Clearinghouse at the Census Bureau, and (for recipients issuing subawards) the FFATA Subaward Reporting System at GSA; The original DATA Act draft would have imposed new reporting requirements on agencies and recipients in addition to these existing requirements.
- [22] Vox.com DATA Act Story ("Warner decided to change the bill to ease their concerns. He dropped the provision requiring new financial reports from recipients of federal funds—they would no longer have to do the extra paperwork they so dreaded ... Now, the bill would just focus on standardizing and consolidating existing data from the agencies").
- [23] DATA Act at new FFATA subsection 4(a), etc.
- [24] DATA Act purpose no. 2, new FFATA subsection 4(a), new FFATA subsection 4(c).
- [25] Zack Pesavento, Data Coalition, "Leak Reveals White House OMB Effort to Remove Key Provisions from DATA Act" (January 27, 2014), http://www.datacoalition.org/leak-reveals-white-house-omb-effort-to-remove-key-provisions-from-data-act/.

- [26] Colby Hochmuth, FedScoop, "Future of the DATA Act: Are OMB and the administration on the same page?" (January 28, 2014), http://fedscoop.com/future-data-act-omb-administration-page/ ("Warner Statement"); Andrea Peterson, Washington Post, "Is the White House trying to blow up an open data bill?" (January 29, 2014), https://www.washingtonpost.com/news/the-switch/wp/2014/01/29/is-the-white-house-trying-to-blow-up-an-open-data-bill/ ("Issa statement").
- [27] 160 Cong. Rec. S2359, 2014 (Senate passage of S. 994), https://www.congress.gov/congressional-record/2014/04/10/senate-section/article/S2359-1; 160 Cong. Rec. H3203, 2014 (House passage of S. 994), https://www.congress.gov/congressional-record/2014/04/28/house-section/article/H3203-4.
- [28] The White House's only official mention of the DATA Act was a one-sentence statement issued the day after it was signed, Press Release, White House, "Statement by the Press Secretary on S. 994" (May 10, 2014), https://www.whitehouse.gov/the-press-office/2014/05/10/statement-press-secretary-s-994.
- [29] DATA Act at new FFATA subsection 4(a), etc.
- [30] DATA Act at new FFATA paragraph 4(b)(3).
- [31] DATA Act at new FFATA paragraph 4(b)(2).
- [32] DATA Act at new FFATA paragraph 4(c)(1).
- [33] David Mader and David Lebryk, White House Blog, "Better data, Better decisions, Better government" (May 8, 2015), https://www.whitehouse.gov/blog/2015/05/08/better-data-better-decisions-better-government; OMB, Memorandum for the Heads of Departments and Agencies, M-15-12, "Increasing Transparency of Federal Spending by Making Federal Spending Data Accessible, Searchable, and Reliable" (May 8, 2015) ("OMB May 2015 Memo"), https://www.whitehouse.gov/sites/default/files/omb/memoranda/2015/m-15-12.pdf.
- [34] Department of the Treasury, Data Act Information Model Schema v1.0, http://fedspendingtransparency.github.io/data-model/ (accessed June 15, 2016).
- [35] OMB, Memorandum for the Heads of Departments and Agencies, Management Procedures Memorandum No. 2016-3, "Additional Guidance for DATA Act Implementation: Implementing Data-Centric Approach for Reporting Federal Spending Information" (May 3, 2016) ("OMB May 2016 Memo"), https://www.whitehouse.gov/sites/default/files/omb/financial/memos/management-procedures-memorandum-no-2016-03-additional-guidance-for-data-act-implementation.pdf.
- [36] FFATA subsection 2(b).
- [37] DATA Act at new FFATA section 3.
- [38] DATA Act at new FFATA section 3.
- [39] One of the most significant challenges of the DATA Act is the necessity of connecting information managed by financial systems—appropriations, accounts, budget actions, etc.—to corresponding information managed by award systems, such as grant and contract details, OMB May 2015 Memo at 8; OMB May 2016 Memo at 3; see

also GAO, "Data Standards Established, but More Complete and Timely Guidance is Needed to Ensure Effective Implementation" (January 2016), Report No. GAO-16-261 ("GAO January 2016 DATA Act Report"), http://www.gao.gov/assets/680/674878.pdf, at Table 3, Step 4.

[40] DATA Act at new FFATA subsection 4(c)(2).

[41] The DATA Act amends FFATA to require the website to "ensure that all information published under [the law] is available ... in machine-readable and open formats [and available] to be downloaded in bulk," DATA Act at new FFATA paragraph 2(c)(7); Treasury and OMB have not yet taken the steps necessary to make all information covered by FFATA and the DATA Act available in open formats and for bulk download; The federal government currently uses the proprietary Data Universal Numbering System ("DUNS") Number to identify recipients of contracts, grants, and other assistance; The DUNS Number is owned by the contractor Dun & Bradstreet, Inc. ("D&B"); Under the terms of D&B's government-wide contract, information on recipients' identities can be viewed on USASpending.gov, but users of the website are banned from downloading information in bulk; See USASpending.gov, "Limitation on Permissible Use of Dun & Bradstreet, Inc. (D&B) Data," https://www.usaspending.gov/ pages/db.aspx (accessed June 15, 2016) ("By using this website you agree that you shall not use D&B data without giving written attribution to the source of such data (i.e., D&B) and shall not access, use or disseminate D&B data in bulk"); If the federal government continues to use the DUNS Number to identify recipients, the website will not meet the requirements of FFATA, as amended by the DATA Act, because the DUNS Number is proprietary and not an "open" standard and because the restriction on bulk download is imposed under D&B's contract; On July 31, 2015, Treasury and OMB announced that the DUNS Number would continue to be used as the data element for recipient identification under the DATA Act, but "the Federal government will establish a transparent process for exploring potential alternatives to existing entity identifiers," to be completed in fiscal year 2017; See Department of the Treasury, "Elements: Awardee/ Recipient Unique Identifier, Awardee/Recipient Legal Entity Name, Ultimate Parent Unique Identifier Number, Ultimate Parent Legal Entity Name" (July 31, 2015), https:// fedspendingtransparency.github.io/whitepapers/unique-id-business-name/.

[42] Under FFATA, OMB is responsible for ensuring the establishment and operation of USASpending.gov, FFATA subsection (2)(b); In February 2014, OMB designated Treasury as its agent under FFATA for operating and supporting USASpending.gov; See USASpending.gov, "USASPENDING.GOV" (accessed June 15, 2016), https://www.usaspending.gov/about/usaspending/Pages/default.aspx.

[43] https://openbeta.usaspending.gov; see also David Lebryk, Treasury Notes Blog, "Help Treasury Reinvent USASpending.gov" (November 10, 2015) ("Lebryk Open Beta Blog Post"), https://www.treasury.gov/connect/blog/Pages/Help-Treasury-Reinvent-USAspending.gov.aspx. OpenBeta.USASpending.gov currently features prototypes of transparency platforms that explore federal contract and grant spending. See https://openbeta-contracts-explorer.usaspending.gov (accessed June 24, 2016); https://openbeta-grants-explorer.usaspending.gov (accessed June 24, 2016).

[44] See Lebryk Open Beta Blog Post.

[45] GAO January 2016 DATA Act Report page 5.

- [46] Treasury Fiscal Service, Presentation, "Financial Data Transparency" (August 13, 2014), https://www.fiscal.treasury.gov/fstraining/events/FinancialDataTransparency.pdf, page 6 (listing goal of "captur[ing] and mak[ing] available financial management data to enable the data consumers to follow the complete life cycle of Federal spending—from appropriations to the disbursements of grants, contracts, and administrative spending").
- [47] U.S. Constitution section 9, clause 6 ("No Money shall be drawn from the Treasury, but in Consequence of Appropriations made by Law").
- [48] The DATA Act applies its mandates to all organizations within the expansive definition of "executive agency" that is contained in 5 U.S.C. section 105, DATA Act at new FFATA paragraph 2(a)(3); This definition includes all executive departments, government corporations, and independent establishments; One prominent exception is the Postal Service, which regularly asserts that it is not an "executive agency" within the meaning of 5 U.S.C. section 105 because its leadership is not selected by the President (the President appoints members of the Postal Service's Board of Governors but may remove them only for cause, and the Governors select the Postmaster General); See, e.g., U.S. Postal Service, "Memorandum Opinion for the Acting Attorney General, Civil Rights Division: Status of the United States Postal Services as an 'Executive Agency' Under Executive Order No. 12,250," (July 29, 1981) (on file with author).
- [49] DATA Act at new FFATA paragraph 4(c)(2).
- [50] Data Act Information Model Schema v1.0 (diagram at "Information Flow").
- [51] Hudson Hollister, Welcome Address, DATA Act Summit 2016, Washington, D.C. (May 27, 2016), https://vimeo.com/album/3999534/video/170631537 (citing persistence of legacy reporting systems as one of two "existential threats" to successful implementation).
- [52] See DATA Act purpose no. 4 ("improve the quality of data submitted to USASpending.gov by holding Federal agencies accountable for the completeness and accuracy of the data submitted").
- [53] DATA Act at new FFATA subsection 6(a).
- [54] DATA Act at new FFATA subsection 6(b).
- [55] DATA Act at new FFATA subsection 6(a).
- [56] DATA Act at new FFATA subsection 6(b).
- [57] See, e.g., GAO January 2016 DATA Act Report; GAO, "DATA Act: Section 5 Pilot Design Issues Need to be Addressed to Meet Goal of Reducing Recipient Reporting Burden" (April 2016), Report No. GAO- 16-438 ("GAO April 2016 DATA Act Report"), http://www.gao.gov/assets/680/676691.pdf.
- [58] House Committee on Oversight and Government Reform, Hearing: Transforming Federal Spending: Implementing the Digital Accountability and Transparency Act (December 3, 2014), 113th Congress 2nd session, Washington, D.C. ("December 2014 Oversight Hearing"), video and testimony, https://oversight.house.gov/hearing/transforming-federal-spending-implementing-digital-accountability- transparency-act/;

House Committee on Oversight and Government Reform, Subcommittees on Information Technology and Government Operations, Hearing: DATA Act Implementation (July 29, 2015), 114th Congress 1st session, Washington, D.C. ("July 2015 Oversight Hearing"), video and testimony, https://oversight.house.gov/hearing/data-act-implementation/; House Committee on Oversight and Government Reform, Subcommittees on Information Technology and Government Operations, Hearing: DATA Act: Monitoring Implementation Progress (April 19, 2016), 114th Congress, 2nd session, Washington, D.C. ("April 2016 Oversight Hearing"), video and testimony, https://oversight.house.gov/hearing/data-act-monitoring-implementation-progress/.

- [59] Press Release, Sen. Mark Warner, "Sen. Warner Presses Federal Agencies on Implementation Plan for Financial Transparency Tools Included in 2014 DATA Act" (April 6, 2016), http://www.warner.senate.gov/public/index.cfm/2016/4/sen-warner-presses-federal-agencies-on- implementation-plan-for-financial-transparency-tools-included-in-2014-data-act (includes text of letter from Sen. Warner to agencies); Press Release, Sen. Mark Warner, "Bipartisan Senators Press OMB on Progress of DATA Act Implementation" (May 17, 2016), http://www.warner.senate.gov/public/index.cfm/pressreleases?ContentRecord_id=FD605D09-EF35-40A1- 863F-A8B5F7399360 (includes text of letter from Sens. Mark Warner, Tom Carper, Ron Johnson, and Rob Portman to OMB).
- [60] See, e.g., PARRAScope, "Overview" (accessed June 16, 2016), https://www.parrascope.com/parra/o_about.html (describing software product assisting recipients in automatically generating data for Recovery Act reports); DATA Act Sponsors' Op-Ed ("[T]he DATA Act will reduce reporting costs for entities that are awarded taxpayer dollars. The current reporting systems are duplicative and frustrating. States and organizations like universities are awarded hundreds of different grants from dozens of federal agencies each year. Oftentimes, they must file financial reports on an annual, quarterly, and monthly basis to each of those agencies on each of those grants. The current system is fractured; the state or university may be required to maintain completely different systems to file what is ultimately a very similar report. If this reporting were streamlined, our institutes of higher education and our state and local governments could direct more funding to programs and less to overhead costs").
- [61] Recovery Accountability and Transparency Board, Grants Reporting Information Project (June 2013), http://www.streamlinksoftware.com/grip-report-download ("GRIP Report") (registration required for download).
- [62] GRIP Report at 3 ("The ability to produce standard machine readable report files (e.g., XML2) and to 'bulk' or 'batch' multiple grant reports in one XML file, regardless of agency or program, can significantly increase reporting efficiency").
- [63] DATA Act at new FFATA section 5 (describing scope of pilot program to test standardized reporting); DATA Act purpose no. 3 ("simplify reporting for entities receiving Federal funds by streamlining reporting requirements and reducing compliance costs while improving transparency").
- [64] DATA Act at new FFATA subsection 5(b).
- [65] DATA Act at new FFATA paragraph 5(b)(6).
- [66] DATA Act at new FFATA paragraph 5(b)(7).

- [67] See Miranda Neubauer, TechPresident, "DATA Act, Promising to Increase Federal Spending Accountability, Rises Again" (May 17, 2013), https://techpresident.com/news/23896/data-act-could-prompt-turbotax-grants ("[The DATA Act will] lay the groundwork for such reports to be streamlined and become more automated with the help of technology, and allow for 'Turbotax for grants' type services, [Issa spokesperson Ali Ahmad] said. Currently, such reports are often still compiled by paper, or electronic text based reports are submitted to agencies and often need to be retyped into their own systems, he said. With all federal spending information under the same standards, an automated system could prepopulate reporting fields for grant recipients, allowing agencies to more easily go through the submitted data, verify and ask for corrections").
- [68] Testimony of David Mader, April 2016 Oversight Hearing, https://oversight.house.gov/wp-content/uploads/2016/04/2016-04-19-Mader-OMB-Testimony.pdf, page 3.
- [69] See Billy Mitchell, FedScoop, "Exclusive: HHS to Lead 2-year DATA Act pilot" (December 17, 2014), http://fedscoop.com/hhs-lead-2-year-data-act-pilot.
- [70] Testimony of David Mader, July 2015 Oversight Hearing, https://oversight.house.gov/wp- content/uploads/2015/07/Mader-OMB-Statement-7-29-DATA-Act.pdf, page 4 ("This pilot effort has been driven by OMB, the Department of Health and Human Services, the General Services Administration, and the chief Acquisition Officers Council").
- [71] See HHS DATA Act Program Management Office website, http://www.hhs.gov/about/agencies/asfr/data-act-program-management-office/ (accessed June 16, 2016).
- [72] See, e.g., Email from DATA Act Program Management Office, "Participate in the Section 5 Grants Pilot!" (June 14, 2016).
- [73] See Department of Health and Human Services, Common Data Element Repository ("CDER") Library, https://repository.usaspending.gov/poc-tool/ (accessed June 16, 2016); The public version of the CDER Library includes only 112 data elements while the full version, accessible to verified government users, contains several thousand.
- [74] See HHS DATA Act Program Management Office, "Section 5 Grants Pilot," http://www.hhs.gov/about/agencies/asfr/data-act-program-management-office/section-5-grants-pilot/index.html (accessed June 16, 2016) (describing test models).
- [75] GAO April 2016 Report page 12 (finding that "The Grants Portion of Section 5 Pilot is Generally On Track to Meet DATA Act Requirements but the Procurement Portion is Not"); April 2016 Oversight Hearing (opening statements by Reps. Meadows, Connolly, Hurd, and Kelly); Press Release, Data Coalition, "Congress to Executive Branch: Don't just 'go through the motions' on the DATA Act" (April 19, 2016), http://www.datacoalition.org/press-releases/congress-to-executive-branch-dont-just-go-through-the-motions-on-the-data-act/.
- [76] Hudson Hollister, Welcome Address, DATA Act Summit 2016, Washington, D.C. (May 27, 2016), https://vimeo.com/album/3999534/video/170631537.
- [77] U.S. Constitution section 9, clause 6.

- [78] See Department of the Treasury, "Financial Report of the United States Government" (February 25, 2016), https://www.fiscal.treasury.gov/fsreports/rpt/finrep/fr/15frusg/02242016_FR(Final).pdf.
- [79] See Kaitlin Lee, Presentation, "A picture is worth 1,000 words: Designing the new USASpending.gov" (May 27, 2016), http://www.datacoalition.org/data-act-summit-data-demo-day-2016/ ("Presenters' Slides").
- [80] Testimony of Richard L. Gregg, Senate Homeland Security and Governmental Affairs Committee, Hearing, "Show Me the Money: Improving the Transparency of Federal Spending" (July 18, 2012), 112th Congress 2nd session, Washington, D.C., video and testimony, http://www.hsgac.senate.gov/hearings/show-me-the-money-improving-the-transparency-of-federal-spending, page 1 ("The [Payment Information Repository] will capture and make available payment transaction data that can be linked to other government databases, such as USASpending.gov, to enable the public to follow a payment through the complete spending cycle—from appropriations to the disbursements of grants, contracts, and administrative spending").
- [81] See DATA Act at new FFATA subsection 3(b), etc.
- [82] President Barack Obama's Fiscal Year 2017 Budget was the first to be published in an open data format; See White House, "Interact with the 2017 Budget," https://open.whitehouse.gov/budget (accessed June 16, 2016); see also White House, "Public Budget Database User's Guide," https://github.com/WhiteHouse/budgetdata/blob/2017/USER GUIDE.md (accessed June 16, 2016).
- [83] See OMB May 2016 Memo at 5 (instructing agencies to associate common agency codes with every reported award of a contract, grant, or other assistance).
- [84] See Testimony of Michelle Sager, April 2016 Oversight Hearing, https://oversight.house.gov/wp-content/uploads/2016/04/2016-04-19-Sager-GAO-Testimony.pdf, page 6 ("OMB needs to accelerate efforts to determine how best to merge DATA Act purposes and requirements with the GPRAMA requirement to produce a federal inventory of programs that meets congressional expectations that federal agencies provide useful and valid information for decision making on all federal programs").
- [85] See Zach Graves, FCW, "How the Data Act reveals what agencies don't know" (October 20, 2015), https://fcw.com/articles/2015/10/20/data-act-agency-unaware-noble.aspx (reporting on interview with Small Business Association deputy chief financial officer Tim Gribben).
- [86] Government Performance and Results Act Modernization Act, Public Law No. 111-352 (January 4, 2011) ("GPRAMA"), section 7, https://www.gpo.gov/fdsys/pkg/PLAW-111publ352/html/PLAW- 111publ352.htm.
- [87] See GPRAMA section 3 (requiring agencies to publish performance plans that "provide a basis for comparing actual program results with the established performance goals").
- [88] See Testimony of Michelle Sager, April 2016 Oversight Hearing, page 6.

- [89] Frank Landefeld, Jamie Yachera, and Hudson Hollister, MorganFranklin Consulting, LLC, Data Coalition, and Data Foundation, "The DATA Act: Vision & Value," section III.B. Standardizing Agencies' Spending Reports.
- [90] GAO, "2014 Annual Report: Additional Opportunities to Reduce Fragmentation, Overlap, and Duplication and Achieve Other Financial Benefits" (Apr 8, 2014), Report No. GAO-14-343, http://www.gao.gov/products/GAO-14-343SP ("[W]e have found that federal budget information is often not available or sufficiently reliable to identify the level of funding provided to programs or activities, making it difficult to assess and address potential duplication").
- [91] Gene Dodaro, Presentation, "Open Data for Government Accountability, Efficiency, and Effectiveness" (November 13, 2014), http://www.gao.gov/assets/670/667158.pdf, page 7; see also GAO, "Grant Implementation Experiences Offer Lessons for Accountability and Transparency" (Jan 24, 2014), Report No. GAO-14-219, http://www.gao.gov/products/GAO-14-219.
- [92] See Hudson Hollister, Data Coalition, "GAO's Dodaro endorses DATA Act to resolve government accounting difficulties, stimulate tech sector: 'Without legislation ... it won't happen'" (July 11, 2013), http://www.datacoalition.org/gaos-dodaro-endorses-data-act-to-resolve-government-accounting- difficulties-stimulate-tech-sector-without-legislation-it-wont-happen/.
- [93] See William Jackson, Government Computer News, "In-house analytics tool maps fraud at USPS" (May 20, 2014), https://gcn.com/Articles/2014/05/20/USPS-RADR-fraud-detection.aspx?Page=1.
- [94] See Elder Research, "DATA Act: Enabling Government-Wide Data Analytics to Detect Waste, Fraud, and Abuse" (accessed June 16, 2016), http://www.datacoalition.org/wp-content/uploads/archivedfiles/dddelder.pdf.
- [95] Hudson Hollister, National Priorities Project Blog, "The Future of Federal Spending Transparency Part One: Recovery.gov" (June 8, 2012), https://www.nationalpriorities.org/blog/2012/06/08/future-federal- spending-transparency-part-one-recoverygov/.
- [96] See USASpending.gov, "Overview of awards by fiscal year, 2008 2016" (accessed June 16, 2016), https://www.usaspending.gov/Pages/TextView.aspx?data=OverviewOfAwardsByFiscalYearTextView (showing total awards for fiscal year 2015, the last year for which figures were complete, at \$2.84 trillion).
- [97] Assuming that a new government-wide DATA Operations Center would recover a percentage of funds comparable to the percentage saved by the temporary Recovery Accountability and Transparency Board's Recovery Operations Center ("ROC"); The ROC recovered (or prevented from being paid) \$157 million by scrutinizing standardized data on the \$275 billion spent on grants, contracts, and other assistance under the American Recovery and Reinvestment Act ("ARRA"); See Recovery Operations Center Press Release quoted by Charles Clark, GovExec, "Historic Effort to Track Stimulus Spending Wraps Up" (September 28, 2015), http://www.govexec.com/oversight/2015/09/historic-effort-track- stimulus-spending-wraps/122129/, and quoted by Anjali Shastry and Stephen Dinan, Washington Times, "Recovery board folding with mixed track record of stimulus plan" (September 29, 2015), http://www.washingtontimes.com/news/2015/sep/29/recovery-board-folding-with-mixed-track-record-of-/? page=all; Recovery percentage is

- 0.057%; The DATA Act will create a single, standardized data set covering the entire \$2.84 trillion spent on contracts, loans, and other assistance per year; If a DATA Operations Center were to recover the same percentage as the ROC, it would save \$1.6 billion annually.
- [98] GAO publishes an annual report on opportunities to reduce fragmentation, overlap, and duplication; See GAO, "Duplication and Cost Savings" (accessed June 16, 2016), http://www.gao.gov/duplication/overview.
- [99] See Katy Rother, Data Coalition Blog, "Duplication in Federal Programs: Hidden in Opaque Federal Spending Data" (April 16, 2013), http://www.datacoalition.org/duplication-in-government-programs- hidden-in-opaque-federal-spending-data/.
- [100] See, e.g., GAO, "Fiscal Outlook and the Debt" (accessed June 16, 2016), http://www.gao.gov/fiscal_outlook/overview#t=1 ("GAO's federal simulations show that absent policy changes, the federal government faces a rapid and unsustainable growth in debt").
- [101] See, e.g., Evidence-Based Policymaking Commission Act of 2016, Public Law No. 114-140, https://www.congress.gov/114/plaws/publ140/PLAW-114publ140.pdf; Government Transformation Act of 2016, H.R. 2826, https://www.congress.gov/bill/114th-congress/house-bill/2826/text.
- [102] See White House, "Office of Federal Financial Management Single Audit" (accessed June 16, 2016), https://www.whitehouse.gov/omb/financial_fin_single_audit.
- [103] FFATA subsection 2(d); Federal Funding Accountability and Transparency Act Subaward Reporting System ("FSRS") (accessed June 16, 2016), https://www.fsrs.gov.
- [104] See Department of Health and Human Services, CDER Library, https://repository.usaspending.gov/poc-tool/ (accessed June 16, 2016).
- [105] DATA Act at new FFATA paragraph 5(b)(7) ("Not later than 1 year after the date on which the Director submits the report [to Congress on the success of the pilot program (required by August 9, 2017),] the Director shall issue guidance to the heads of Federal agencies as to how the Government-wide financial data standards ... shall be applied to the information required to be reported by entities receiving Federal awards to (A) reduce the burden of complying with reporting requirements; and (B) simplify the reporting process, including by reducing duplicative reports").
- [106] See Congressional Budget Office, "Sequestration" (accessed June 16, 2016), https://www.cbo.gov/taxonomy/term/33/featured.
- [107] See U.S. Public Interest Research Group Education Fund, "Following the Money 2016: How the 50 States Rate in Providing Online Access to Government Spending Data" (April 2016), http://www.uspirg.org/sites/pirg/files/reports/USP %20FollowMoney16%20Report%20Apr16.pdf; The Public Interest Research Group found that by 2016, 45 states provided at least some payment-level data on their spending. Ohio, tied for the Public Interest Research Group's top ranking with a score of 100, publishes the checkbook-level spending information of both state and local government entitles; local governments are invited to contribute their spending data voluntarily for publication; See Ohio Treasurer Josh Mandel, OhioCheckbook.com (accessed June 16, 2016), http://ohiotreasurer.gov/Transparency/Ohios-Online-Checkbook.