United States Government Accountability Office

Report to Congressional Committees

June 2014

SMALL BUSINESS RESEARCH PROGRAMS

More Guidance and Oversight Needed to Comply with Spending and Reporting Requirements

GAO-14-431

GAO Highlights

Highlights of GAO-14-431, a report to congressional committees

June 2014

SMALL BUSINESS RESEARCH PROGRAMS

More Guidance and Oversight Needed to Comply with Spending and Reporting Requirements

Why GAO Did This Study

Federal agencies have awarded more than 156,000 contracts and grants, totaling nearly $40 billion, through the SBIR and STTR programs to small businesses to develop and commercialize innovative technologies. The Small Business Act requires agencies with extramural R&D budgets that meet certain thresholds for participation—$100 million for SBIR and $1 billion for STTR—must spend a percentage of these annual budgets on the programs. The agencies are to report on their activities to SBA and, in turn, SBA is to report to Congress.

The 2011 reauthorization of the programs mandated GAO to review compliance with spending and reporting requirements, and other program aspects. This report addresses, for fiscal year 2012, (1) the extent to which agencies complied with spending requirements, (2) the extent to which agencies and SBA complied with certain reporting requirements, (3) the potential effects of basing spending requirements on agencies' total R&D budgets, and (4) what is known about the amounts spent administering the programs. GAO reviewed agency spending data and required reports for fiscal year 2012 and interviewed program officials from SBA and the participating agencies.

What GAO Recommends

GAO recommends, among other things, that SBA revise program policy directives to accurately summarize spending requirements and request that agencies submit their methodology reports on time. SBA and participating agencies generally agreed with GAO's findings and recommendations.

View GAO-14-431. For more information, contact Frank Rusco at (202) 512-3841or ruscof@gao.gov.

What GAO Found

Agency data indicate that 8 of the 11 agencies participating in the Small Business Innovation Research (SBIR) program and 2 of the 5 agencies participating in the Small Business Technology Transfer (STTR) program complied with spending requirements in fiscal year 2012. Program managers for agencies that did not comply with the requirements identified reasons for noncompliance. For example, program managers at two of the agencies told GAO that they believe their agencies comply with spending requirements if the agencies spend the total amount reserved or budgeted for the program, regardless of the year the funding is spent. However, the authorizing legislation for the programs requires agencies to "expend" a certain amount of funding each year. This difference in the interpretation of spending requirements occurred, in part, because the Small Business Administration's (SBA) policy directives for the programs inaccurately state that the authorizing legislation requires agencies to "reserve" the minimum amount each year. Additionally, some officials told GAO their agencies did not comply with spending requirements because the recent reauthorization of the programs included an increased spending requirement in fiscal year 2012, but the reauthorization was enacted a full quarter into the fiscal year, after some agencies had planned their programs and made awards.

Participating agencies and SBA did not fully comply with certain reporting requirements for the SBIR and STTR programs. For example, participating agencies are required to submit reports to SBA describing their methodologies for calculating their budgets for extramural research or research and development (R&D)—which is generally conducted by nonfederal employees outside of federal facilities—within 4 months of the enactment of appropriations. However, all 11 participating agencies were late in submitting these reports because SBA allowed them to submit the reports later. As a result, SBA was unable to analyze the reports and provide timely feedback to assist agencies in accurately calculating these budgets.

Potential effects of basing each participating agency's spending requirement on its total R&D budget instead of its extramural R&D budget include an increase in the amount of the spending requirement—for some agencies more than others—and, if the thresholds for participation in the programs did not change, an increase in the number of agencies required to participate. Officials identified benefits of such a change, such as funding more projects, but they generally said the drawbacks could outweigh the benefits.

Little is known about the total amounts agencies spent administering the SBIR and STTR programs because agencies did not consistently collect such information for fiscal year 2012. Agencies are not required to track costs for administering the programs. Most agencies provided GAO with some data on such costs for fiscal year 2012, ranging from about $200,000 to about $8 million, but the data were wide-ranging, incomplete, and unverifiable. With the start of a pilot program in fiscal year 2013 that allows agencies to use up to 3 percent of SBIR program funds for administrative costs, agencies will be required to report to SBA on the amount spent for such activities. However, even with the pilot program, agencies will likely not identify or track all administrative costs.

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Abbreviations

R&D	research or research and development
SBA	Small Business Administration
SBIR	Small Business Innovation Research
STTR	Small Business Technology Transfer

U.S. GOVERNMENT ACCOUNTABILITY OFFICE
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June 6, 2014

Congressional Committees

Since the early 1980s, federal agencies have awarded more than 156,000 contracts and grants totaling nearly $40 billion through two small business research programs: the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. The SBIR and STTR programs are similar in that participating agencies identify topics for research or research and development (R&D) projects and make awards to small businesses to develop and commercialize innovative technologies. However, for the SBIR program, a for-profit small business performs the work associated with an award, while the STTR program requires the small business to partner with a nonprofit research institution—such as a nonprofit college or university or federally funded research and development center—to perform the work.

Federal agencies with a budget of $100 million or more for extramural R&D are required to establish and operate an SBIR program, while federal agencies with budgets of $1 billion or more for extramural R&D are required to establish and operate an STTR program.[1] Currently, 11 agencies participate in the SBIR program, and 5 of these agencies also participate in the STTR program, as shown in table 1.

[1]Agencies' R&D programs generally include funding for two types of R&D: intramural and extramural. Intramural R&D is conducted by employees of a federal agency in or through government-owned, government-operated facilities. Extramural R&D is generally conducted by nonfederal employees outside of federal facilities. Agencies are required to calculate their extramural R&D budget by subtracting amounts obligated for intramural R&D from total obligations for R&D.

Table 1: Agencies Participating in the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs

Agency	Program SBIR	Program STTR
Department of Agriculture (USDA)	X	
Department of Commerce	X	
Department of Defense (DOD)	X	X
Department of Education	X	
Department of Energy (DOE)	X	X
Department of Health and Human Services (HHS)	X	X
Department of Homeland Security (DHS)	X	
Department of Transportation (DOT)	X	
Environmental Protection Agency (EPA)	X	
National Aeronautics and Space Administration (NASA)	X	X
National Science Foundation (NSF)	X	X

Source: Small Business Administration.

The Small Business Act, which authorizes the programs, establishes the minimum percentage of an agency's extramural R&D budget that must be spent on the programs annually.[2] In fiscal year 2012, agencies participating in the SBIR program were required to spend at least 2.6 percent of their extramural R&D budgets on the program and agencies participating in the STTR program were required to spend at least 0.35 percent of their extramural R&D budgets on the program. The SBIR and STTR policy directives require participating agencies to submit data to the Small Business Administration (SBA) each year on the amount of their extramural R&D budgets and the amount obligated for awards, among other information. The Small Business Act also establishes certain reporting requirements for participating agencies and SBA. Among other things, agencies are to report to SBA on their methodologies for calculating their extramural R&D budgets within 4 months of the enactment of their annual appropriations. Furthermore, SBA is to annually report to Congress on all participating agencies' SBIR and STTR programs.

[2]In this report, we refer to the amounts resulting from applying these mandated percentages to extramural R&D budgets as "spending requirements."

In addition, the 2011 reauthorization of the programs mandates that GAO review the participating agencies' compliance with spending and reporting requirements for the programs, as well as other aspects of the programs.[3] We issued our first annual report in response to this mandate in September 2013, which covered fiscal years 2006 through 2011.[4] In that report, we recommended, among other things, that SBA provide more guidance to agencies for calculating spending requirements under certain circumstances and provide more timely reports to Congress. This second annual report determines for fiscal year 2012 (1) the extent to which participating agencies complied with the programs' spending requirements, (2) the extent to which participating agencies and SBA complied with certain reporting requirements, (3) the potential effects of basing the spending requirements for the SBIR and STTR programs on agencies' total R&D budgets instead of their extramural R&D budgets, and (4) what is known about the amounts participating agencies spent for administering the programs.

To address these objectives, we followed the methodology that we used for our first annual report on these issues. To determine the extent to which participating agencies complied with the programs' spending requirements in fiscal year 2012, we used the data that each agency submitted to SBA and calculated each agency's spending requirement by applying the mandated percentages to the agency's extramural R&D budget. We then compared the spending requirements to the total obligations data the agencies submitted to SBA for fiscal year 2012.[5] We determined that an agency complied with its spending requirement if the agency's spending for these programs was equal to or greater than the

[3]National Defense Authorization Act for Fiscal Year 2012, Pub. L. No. 112-81, 125 Stat. 1298, § 5136.

[4]GAO, *Small Business Research Programs: Actions Needed to Improve Compliance with Spending and Reporting Requirements,* GAO-13-421 (Washington, D.C.: Sept. 9, 2013). In addition to our first annual report to address this mandate, we have issued several other reports on the SBIR and STTR programs dating back to the 1980s, including, most recently, *Small Business Innovation Research: Data Rights Protections,* GAO-14-116R (Washington, D.C.: Nov. 4, 2013) and *Small Business Research Programs: Agencies Are Implementing New Fraud, Waste, and Abuse Requirements,* GAO-13-70R (Washington, D.C.: Nov. 15, 2012).

[5]We used the agencies' total program obligations data to represent spending for the programs, in part because obligations data were readily available from each of the agencies for program purposes, and because obligations provided a reasonable measure of the spending for the programs in each year.

calculated spending requirement.[6] To assess the reliability of these data, we interviewed agency officials about the source of the data and data quality control procedures for the data, reviewed relevant documentation, and compared the agency's submissions to SBA with SBA's version of documents received from the agencies. We determined the data were sufficiently reliable for the purposes of this report. We discussed agencies' compliance with spending requirements, including reasons agencies did not meet spending requirements, with program officials at each of the participating agencies.

To determine the extent to which participating agencies and SBA complied with certain reporting requirements for fiscal year 2012, we compared information in the methodology reports that each agency submitted to SBA to requirements in the law and SBA policy directives. Additionally, we requested SBA's report to Congress for fiscal year 2012 and discussed the status of that report with SBA program officials, who said it had not been submitted at the time of our review.

To determine the potential effects of basing spending requirements for the SBIR and STTR programs on agencies' total R&D budgets instead of their extramural R&D budgets, we used fiscal year 2012 data on total R&D budget authority from the President's budget to calculate potential spending requirements for each federal agency.[7] In calculating these potential spending requirements, we assumed that the same spending percentages currently required by the Small Business Act would apply to total R&D budgets. We also assumed that the current spending thresholds that require agency participation in the SBIR and STTR programs when applied to extramural R&D budgets would apply to total R&D budgets. In other words, an agency with a total annual R&D budget of $100 million or more would be required to participate in the SBIR program, while an agency with a total annual R&D budget of $1 billion or

[6]If an agency's spending for the SBIR or STTR programs as a percentage of its extramural R&D budget was within a rounding error of the required level, we considered that agency to be in compliance with the spending requirement.

[7]Office of Management and Budget, *Fiscal Year 2014 Analytical Perspectives, Budget of the U.S. Government* (Washington, D.C.: Apr. 10, 2013). Because agencies did not include their total R&D budget authority in their data submitted to SBA, and we were seeking information across all government agencies, we relied on the amount of budget authority reported in the *Analytical Perspectives* volume for calculation of the spending requirements for the alternative scenarios.

more would be required to participate in both the SBIR and STTR programs. We compared the spending requirements that would result under this scenario with the spending requirements under the current law to determine the potential effects that changing the methodology to calculate the spending requirements could have had for fiscal year 2012, recognizing that changes to the thresholds for participating in the programs or the mandated percentages could have different effects. We also calculated spending requirements under another scenario to determine whether different assumptions would lead to different outcomes. Under this scenario, we applied a lower percentage than is required under current law to each agency's total R&D budget. Additionally, we discussed the effects of changing the methodology for calculating the spending requirements for the programs with program officials at each of the agencies currently participating in the programs and offered the agencies that could be affected by the change an opportunity to comment on our analysis.

To determine what is known about the amounts participating agencies spent for administering the programs, we collected administrative cost data from agencies and discussed the data with program officials. We determined that these data were too incomplete and from such varied sources that an assessment of the available data's reliability was not possible. Consequently, we could not use the data to draw conclusions about agencies' administrative costs in our report.

We conducted this performance audit from November 2013 to June 2014 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.

Background

The SBIR program was initiated in 1982 and has four main purposes: (1) use small businesses to meet federal R&D needs, (2) stimulate technological innovation, (3) increase commercialization of innovations derived from federal R&D efforts, and (4) encourage participation in technological innovation by small businesses owned by women and disadvantaged individuals. The purpose of the STTR program—initiated in 1992—is to stimulate a partnership of ideas and technologies between innovative small businesses and research institutions through federally funded R&D.[8] The National Defense Authorization Act for Fiscal Year 2012, enacted on December 31, 2011, reauthorized the SBIR and STTR programs through September 30, 2017.[9]

The SBIR and STTR programs each include the following three phases:

- In phase I, agencies make awards to small businesses to determine the scientific and technical merit and feasibility of ideas that appear to have commercial potential. Phase I awards normally do not exceed $150,000. For SBIR, phase I awards generally last 6 to 9 months and for STTR these awards generally last 1 year.
- In phase II, small businesses with phase I projects that demonstrate scientific and technical merit and feasibility, in addition to commercial potential, may compete for awards of up to $1 million to continue the R&D for an additional period, normally not to exceed 2 years.
- Phase III is for small businesses to pursue commercialization of technology developed in prior phases. Phase III work derives from, extends, or completes an effort made under prior phases, but it is funded by sources other than the SBIR or STTR programs. In this phase, small businesses are expected to raise additional funds from private investors, the capital markets, or from funding sources within the agency that made the initial award other than its SBIR or STTR program. While SBIR or STTR funding cannot be used for phase III, agencies can participate in phase III by, for example, purchasing the technology developed in prior phases.[10]

SBA's Office of Investment and Innovation is responsible for overseeing and coordinating the participating agencies' efforts for the SBIR and STTR programs by setting overarching policy and issuing policy directives, collecting program data, reviewing agency progress, and reporting annually to Congress, among other responsibilities. As part of

[8]Research institutions include nonprofit colleges or universities and federally funded research and development centers.

[9]Pub. L. No. 112-81, Div. E.

[10]For examples of how one agency has used phase III awards, see GAO, *Small Business Innovation Research: DOD's Program Supports Weapon Systems, but Lacks Comprehensive Data on Technology Transition Outcomes,* GAO-14-96 (Washington, D.C.: Dec. 20, 2013).

its oversight and coordination role, SBA issued SBIR and STTR policy directives in September 2002 and December 2005, respectively, and updated them in August 2012, January 2014, and February 2014. These directives explain and outline additional requirements for agencies' implementation of the SBIR and STTR programs. Among the topics discussed, the policy directives include a listing of the data that agencies are to submit to SBA annually—such as their extramural R&D budget amounts and the amounts obligated for awards for the programs—and call for agencies to submit reports describing their methodologies for calculating their extramural R&D budgets within 4 months of the enactment of appropriations.

Each participating agency must manage its SBIR and STTR programs in accordance with program laws, regulations, and the policy directives issued by SBA. In general, the programs are similar across agencies. For those agencies that have both SBIR and STTR programs, agencies usually use the same process for both programs. Each participating agency has considerable flexibility to design and manage the specifics of these programs, such as determining research topics, selecting award recipients, and administering funding agreements. All of the agencies follow the same general process to obtain proposals from and make awards to small businesses for both the SBIR and STTR programs. At least annually, each participating agency issues a solicitation requesting proposals for projects in topic areas determined by the agency. Each agency uses its own process to review proposals and determine which proposals should receive awards. Also, each agency determines whether the funding for awards will be provided as grants or contracts.

Data Indicate Not All Agencies Met Spending Requirements

Agency data indicate that not all agencies complied with the SBIR and STTR spending requirements for fiscal year 2012. Program managers identified several reasons why agencies did not comply with the spending requirements.

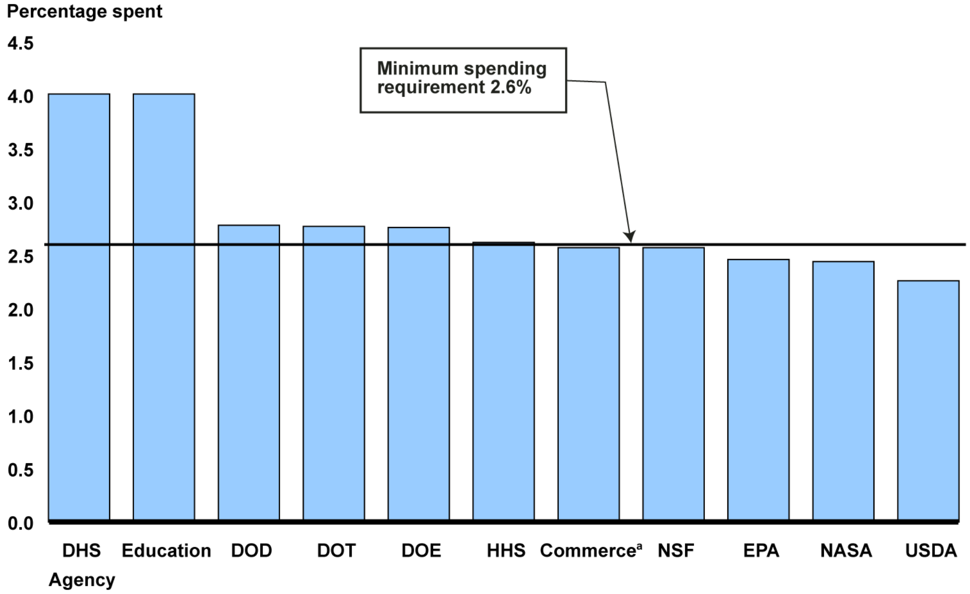
Agency Data Indicate Most Agencies Complied with SBIR Spending Requirements

The data agencies submitted to SBA indicates that 8 of the 11 participating agencies met or exceeded their fiscal year 2012 spending requirements for the SBIR program, while 3 of the agencies did not meet the requirements (see fig. 1 and app. I for additional data).[11] According to the agencies' data, the 8 agencies that met or exceeded the requirements spent between 2.6 percent and 4.0 percent of their extramural R&D budgets on the program, and the remaining 3 agencies spent between 2.3 percent and 2.5 percent. In comparison, agency data indicated that 10 of the 11 agencies met or exceeded spending requirements in fiscal year 2011, and that 3 of the 11 agencies complied with spending requirements each fiscal year from 2006 through 2011, as we found in September 2013.[12]

[11]For the purposes of this report, we defined compliance as spending at least 2.6 percent of an agency's extramural R&D budget on the SBIR program in fiscal year 2012, as required by the Small Business Act. This method is consistent with SBA's approach for determining compliance with spending requirements in its annual report to Congress on the program. We used the agencies' obligations data to represent spending for the programs, in part because obligations data were readily available from each of the agencies for program purposes, and because obligations provided a reasonable measure of the spending for the programs in each year.

[12]See GAO-13-421. NSF was the agency that did not comply with SBIR spending requirements in fiscal year 2011. DHS, Education, and HHS complied with their SBIR spending requirements each fiscal year from 2006 to 2011. The agency data we reported differed from some of the data included in SBA's report to Congress for fiscal years 2009 to 2011, which SBA issued in December 2013. According to SBA officials, some agencies submitted updated data to SBA for those years after they provided the data to us. These changes did not affect the number of agencies that complied with spending requirements in fiscal year 2011 or in all 6 fiscal years from 2006 through 2011. For SBA's annual report to Congress, see *SBA: The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Program Annual Report Fiscal Years 2009-2011* (Washington, D.C.: December 2013).

Figure 1: Percentage of Extramural Research or Research and Development Budgets That Participating Agencies Spent for the Small Business Innovation Research Program in Fiscal Year 2012



Sources: GAO analysis of agency data submitted to SBA. | GAO-14-431

Note: We defined compliance as spending at least 2.6 percent of an agency's extramural research or research and development (R&D) budget on the Small Business Innovation Research (SBIR) program in fiscal year 2012, as required by the Small Business Act. This method is consistent with SBA's approach for determining compliance with spending requirements in its reports to Congress on the program. We used the agencies' obligations data to represent spending for the programs, in part because obligations data were readily available from each of the agencies for program purposes, and because obligations provided a reasonable measure of the spending for the programs in each year.

[a]Officials from one subunit within the Department of Commerce—the National Institute of Standards and Technology—said that they calculate their spending requirement for the program based on their actual obligations for extramural R&D for the previous fiscal year, rather than their extramural R&D budget for the current fiscal year, but they do not report this figure to SBA. We used the data that the Department of Commerce submitted to SBA to calculate its spending requirements.

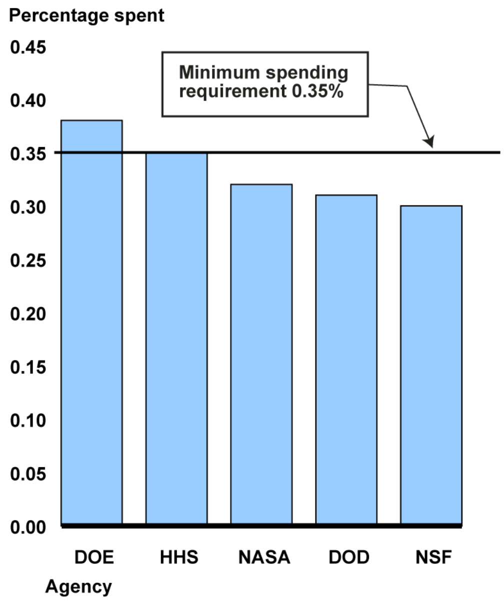
Agency Data Indicate Two Agencies Complied with STTR Spending Requirements

Our analysis of the data agencies submitted to SBA indicates that two of the five agencies participating in the STTR program met or exceeded their fiscal year 2012 spending requirements, while the remaining three agencies did not meet the requirements (see fig. 2 and app. II for additional data).[13] According to the agencies' data, the two agencies that complied with the requirements spent between 0.35 percent and 0.38 percent of their extramural R&D budgets on their STTR programs, and the three agencies that did not comply spent between 0.30 percent and 0.32 percent. In comparison, the data that agencies submitted to SBA indicated that two of the five agencies, HHS and NASA, complied with spending requirements in fiscal year 2011, and one of the agencies—HHS—complied with spending requirements each fiscal year from 2006 to 2011, as we found in September 2013.[14]

[13]For the purposes of this report, we defined compliance as spending at least 0.35 percent of an agency's extramural R&D budget on the STTR program in fiscal year 2012, as required by the Small Business Act. This method is consistent with SBA's approach for determining compliance with spending requirements in its reports to Congress on the program. We used the agencies' obligations data to represent spending for the programs, in part because obligations data were readily available from each of the agencies for program purposes, and because obligations provided a reasonable measure of the spending for the programs in each year.

[14]See GAO-13-421. The agency data that we reported differed from some of the data included in SBA's report to Congress for fiscal years 2009 to 2011, which SBA issued in December 2013. According to SBA officials, some agencies submitted updated data to SBA for those years after they provided the data to us. These changes did not affect the agencies that complied with spending requirements in fiscal year 2011 or in all 6 fiscal years from 2006 through 2011. For SBA's report, see *SBA: SBIR and STTR Program Annual Report Fiscal Years 2009-2011*.

Figure 2: Percentage of Extramural Research or Research and Development Budgets That Participating Agencies Spent for the Small Business Technology Transfer Program in Fiscal Year 2012



Sources: GAO analysis of agency data submitted to SBA. | GAO-14-431

Note: We defined compliance as spending at least 0.35 percent of an agency's extramural R&D budget on the STTR program in fiscal year 2012, as required by the Small Business Act. This method is consistent with SBA's approach for determining compliance with spending requirements in its reports to Congress on the program. We used the agencies' obligations data to represent spending for the programs, in part because obligations data were readily available from each of the agencies for program purposes, and because obligations provided a reasonable measure of the spending for the programs in each year.

Program Managers Identified Reasons Agencies Did Not Comply with Spending Requirements

Program managers at the agencies that did not comply with spending requirements for fiscal year 2012 identified reasons that the agencies did not comply: (1) some agencies reserved funds to spend in a subsequent fiscal year without spending the minimum required amount in fiscal year 2012; (2) the spending requirement increased part of the way through the year, after agencies made spending plans; (3) agencies did not submit data on all of their spending; and (4) the amount agencies spent on extramural R&D was higher than estimated at the beginning of the fiscal year. Some of these circumstances also applied to agencies that complied with spending requirements in fiscal year 2012.

Some Agencies Reserved Funds to Spend in a Subsequent Fiscal Year

Two of the agencies that did not comply with spending requirements—DOD and USDA—reserved funds to spend in a subsequent fiscal year without spending the minimum required amount in fiscal year 2012.[15] The Small Business Act requires participating agencies to "expend" the minimum percentages of their extramural R&D budgets with small businesses annually. Additionally, SBA officials said they expect agencies to spend at least the minimum required percentages on the programs each year. However, program officials at DOD and USDA told us that they believe their agencies comply with spending requirements if the agencies spend the total amount reserved or budgeted for the program, regardless of the year the funding is spent. We found that these two agencies did not implement the annual program spending requirements as written in the Small Business Act, in part because SBA's SBIR and STTR policy directives inaccurately summarize the law. Specifically, the policy directives say that the relevant statutory provision requires participating agencies to "reserve" the minimum percentages for awards to small businesses each year.

Some of the participating agencies receive multiyear appropriations and choose to carry over some funding from one fiscal year to the next, in part because of this misinterpretation of the spending requirements. For example, if the amount of funding remaining in the program account is less than the amount of a phase I or phase II award, program managers said they carry over the funding to the next year, rather than make a smaller award to a recipient. An agency can carry over funding from one year to the next and comply with spending requirements if the agency spends the minimum required amount during the fiscal year, regardless of the year the funding was appropriated.

Carrying over funds to the next fiscal year without spending the minimum required amount contributed to two agencies—DOD and USDA—not complying with spending requirements in fiscal year 2012. Program managers from DOD and USDA said their agencies did not meet spending requirements using our method of calculating compliance, but DOD and USDA officials said they will spend all of the funding that was

[15]We determined that an agency complied with spending requirements for the SBIR or STTR programs if the agency spent at least the minimum required percentage of the extramural R&D budget. We used the data that each agency submitted to SBA for total program obligations for fiscal year 2012, regardless of the year the funding was appropriated, to represent program spending for the year.

budgeted for the programs before the funding expires, which they believe meets the intent of the law. Program managers from both agencies explained that they receive multiyear appropriations for research and development funding, which would generally allow them to carry over funds from one year to the next. However, if an agency carries over funding from one year to the next without spending the minimum required amount on the program in each fiscal year, then the agency is not in compliance with the spending requirements. According to SBA officials, SBA agrees with our methodology for calculating compliance and interprets the Small Business Act as requiring agencies to spend, rather than reserve, the required percentages each year.

Carrying over funds from one year to the next without spending the minimum required amount in fiscal year 2012 also contributed to at least one agency—DOD—not complying with spending requirements in prior years. To demonstrate the effect that carrying over funds can have, we made the following calculations for DOD for fiscal years 2006 to 2011 using two different methodologies for calculating program spending.[16] First, we determined the amount spent in a specific year, regardless of the year the funding was appropriated, from DOD's total program obligations data submitted to SBA; this is the method that we used to calculate compliance with spending requirements for this report and the method SBA uses. Second, we calculated the amount of the funding appropriated in a fiscal year that was spent in that year or the next year; this is how DOD believes it should determine its compliance. We found that DOD complied with SBIR spending requirements in 2 of the 6 years from fiscal years 2006 through 2011 and with STTR spending requirements in 4 of the 6 years using our method. DOD's method is incorrect; however, if it were correct, it would yield a compliance determination in each of the 6 years for SBIR and in 5 years for STTR (see app. III for additional detail on our analysis).

[16]We used DOD for this comparison because DOD is the only agency that submitted its spending data to SBA in a way that allowed us to determine the year that funding was appropriated and spent. We could not perform the analysis for DOD's fiscal year 2012 data because the amount of DOD's fiscal year 2012 appropriation that was obligated in fiscal year 2013 will be included in DOD's fiscal year 2013 data submission to SBA, which had not yet been submitted at the time of our review. Agencies' data submissions are typically due to SBA in the March following the end of the fiscal year, but SBA officials said they extended the deadline for the fiscal year 2013 data submissions.

Spending Requirements Increased Partway Through the Year

Increases to the spending requirements partway through fiscal year 2012 contributed to two agencies not complying with spending requirements in fiscal year 2012, according to program managers. The 2011 reauthorization of the SBIR and STTR programs increased the minimum percentages to be spent for the programs for fiscal year 2012, but the law was enacted on December 31, 2011—a full quarter into fiscal year 2012. These increases were the first increases in many years for the programs: the SBIR levels had remained at a minimum of 2.5 percent of the extramural R&D budget from 1997 through 2011, and STTR levels had remained at a minimum of 0.3 percent from 2004 through 2011. Appropriations for fiscal year 2012 were enacted in November and December 2011, so some agencies had already planned their spending for the programs and had started to make awards to meet the prior percentages of 2.5 percent of their extramural R&D budgets for SBIR awards and 0.3 percent for STTR awards. For some agencies, this increase totaled millions of dollars. For example, NASA's SBIR spending requirement increased by about $5.5 million, and its STTR spending requirement increased by about $2.7 million over its estimates at the beginning of the fiscal year due to the higher percentages included in the reauthorization. If the spending requirements had remained at fiscal year 2011 levels, one of the three agencies that did not meet SBIR spending requirements for the year would have met the requirements, and the remaining two agencies would have been much closer to meeting the SBIR spending requirements, and all five agencies would have met the STTR requirements.

The increased spending requirements also affected agencies that complied with spending requirements for the year. For example, program managers at one agency that met SBIR spending requirements told us it was difficult to spend SBIR and STTR funds at the increased levels in the remaining portion of the fiscal year because the agencies had already begun to make awards, and their spending plans for the programs included funding a certain number of projects at a certain level. Program officials at one agency said that, as a result of the increased spending requirements, they increased the amounts of their awards for fiscal year 2013. The officials anticipate that the increased award amounts will help them meet their minimum spending requirements in future years. Program managers from two agencies that met SBIR spending requirements also told us it was difficult to obtain additional funding within their agency to meet the increased spending requirements for the programs because the reauthorization act and resulting increased spending requirements became effective after appropriations were enacted for the year.

Agencies Did Not Submit Complete Information on Program Spending

Program managers at two agencies said that they did not include technical assistance funds as part of their total spending data for the SBIR program, which contributed to the appearance that agencies were more out of compliance than they were for fiscal year 2012. Program managers from three other agencies also told us they could not submit these data. In certain circumstances, amounts spent for discretionary technical assistance count as part of the agency's funding for SBIR or STTR.[17] However, SBA's policy directives for the programs call for agencies to submit data on the amounts spent for awards, but not the amount spent on technical assistance. According to SBA officials, they did not request information on the amounts that agencies spent for technical assistance because SBA does not report the information to Congress.

Program officials at seven agencies—DOD, DOE, DHS, EPA, HHS, NSF, and USDA—said that they provided between about $125,000 and $3.5 million for discretionary technical assistance to certain SBIR or STTR award recipients in fiscal year 2012. Only two of the agencies—DOD and NSF—included this assistance in their total spending data.[18] Several program managers indicated that they did not submit data to SBA on the amounts spent for discretionary technical assistance because SBA did not provide written guidance on whether or how such spending should be included in their data. As a result, agencies did not report the total amounts that they spent on the programs and, therefore, Congress does not have access to complete and accurate information about the amounts spent on the SBIR and STTR programs. For the two agencies that

[17]Agencies are allowed to spend up to $5,000 of program funds per year for each phase I or phase II award through the SBIR or STTR programs for discretionary technical assistance. According to the program policy directives, the purpose of technical assistance is to assist the award recipients in making better technical decisions, solving technical problems that arise during the project, minimizing technical risks associated with the project, and commercializing the product of the research. This funding can be provided either to a vendor that provides the technical assistance to the award recipient or directly to the award recipient. The policy directives also state that funding for technical assistance will be in addition to the award, but counts as part of the agency's funding for SBIR or STTR, unless the agency funds the technical assistance using funds outside of those set aside for SBIR or STTR.

[18]Three agencies—DOE, EPA, and HHS—provided us revised spending data for fiscal year 2012 based on adding in their funding for discretionary technical assistance. We did not include the revised data in our analysis because we used the data that agencies submitted to SBA, and the agencies had not provided the updated total spending data to SBA at the time of our review.

provided technical assistance to award recipients but did not comply with spending requirements, including the amount spent on technical assistance in their total spending figures would have brought the agencies closer to meeting their spending requirements, but it would not have brought the agencies into compliance for the year.

Extramural R&D Was Higher Than Estimated at the Beginning of the Fiscal Year

Program officials at one agency said that changes to the amount of the agency's extramural R&D budget between the estimates early in the fiscal year and the actual amount obligated, which is determined at the end of the year, contributed to the agency not complying with the spending requirements. The Small Business Act requires agencies to calculate their extramural R&D budget by subtracting amounts obligated for intramural R&D from total obligations for R&D. However, the total amount obligated for extramural R&D is not known until the end of the fiscal year. For fiscal year 2012, NASA estimated its extramural R&D budget at the beginning of the year as about $5.5 billion and developed a spending plan for the SBIR and STTR programs based on this budget. However, according to program officials, NASA's extramural R&D budget increased to about $5.7 billion based on the total amount obligated for extramural R&D during the fiscal year. This increase in the extramural R&D budget throughout the year led to an unexpected increase in NASA's minimum spending requirements of about $6.3 million. The officials said that they had no way of knowing what the final extramural R&D budget number would be until after the end of the fiscal year, and by then it was too late to adjust their spending plan for the SBIR or STTR programs. As a result, the increase contributed to NASA's noncompliance with spending requirements in fiscal year 2012.

Agencies Did Not Fully Comply with Certain Reporting Requirements and Submitted Incorrect Data

Participating agencies and SBA did not fully comply with certain reporting requirements for the SBIR and STTR programs. Specifically, participating agencies did not comply with requirements related to reporting their methodologies for calculating their extramural R&D budgets, and two agencies submitted incorrect data to SBA on the size of their extramural R&D budgets for the STTR program. Additionally, SBA has not yet submitted its report on the programs to Congress for fiscal year 2012.

Agencies Did Not Fully Comply with Methodology Reporting Requirements

Each of the agencies submitted its required report on the methodology for calculating the extramural R&D budget to SBA later than required by the Small Business Act and at least 6 of the agencies did not itemize and explain all exclusions from their calculations of their extramural R&D budgets, as called for in the policy directives.[19] Agencies are required by the Small Business Act to submit their methodology reports to SBA within 4 months of enactment of their annual appropriations. However, for fiscal year 2012, the 11 agencies included their methodology reports as part of their data submissions to SBA. Agencies generally submitted their data to SBA from March to July 2013—more than a year after agency appropriations for fiscal year 2012 were enacted on November 18, 2011, and December 23, 2011—because SBA allowed them to submit the reports later.[20] SBA officials said that, as in previous years, they did not need the methodology reports before the program data were due because the officials use the methodology reports to prepare SBA's report to Congress, which cannot be completed without the program data.

As we found in our first annual report on these issues, as a result of not having the methodology reports earlier in the year, SBA does not have an opportunity to promptly analyze these methodologies and provide the agencies with timely feedback to assist agencies in accurately calculating their spending requirements.[21] Without such review and feedback, agencies may be calculating their extramural R&D budgets incorrectly, which could lead to agencies spending less than the required amounts on the programs. We recommended in that report that SBA provide timely annual feedback to each agency following submission of its methodology report on whether its method for calculating the extramural R&D budget complies with program requirements. SBA officials said as of May 2014 that they plan to provide feedback to agencies on their methodology reports for fiscal year 2013 shortly after they receive the reports from the agencies, which are expected in June 2014.

[19]The remaining five agencies did not indicate in their methodology reports to SBA whether they had exclusions for some or all of their programs. Agencies are not explicitly required to do so. However, we cannot judge whether these agencies may have had exclusions that were not included in the report to SBA.

[20]See Consolidated and Further Continuing Appropriations Act, 2012, Pub. L. No. 112-55, 125 Stat. 552; Consolidated Appropriations Act, 2012, Pub. L. No. 112-74, 125 Stat. 786.

[21]GAO-13-421.

Additionally, at least six agencies did not itemize and explain exclusions from their calculations of their extramural R&D budgets. Agencies are required to exclude certain subunits or programs in calculating the extramural R&D budget. For example, agencies with subunits in the intelligence community are to exclude those subunits from their extramural R&D budget.[22] SBA's policy directives call for agencies to itemize their exclusions and their reasons for such exclusions in their reports to SBA. Six of the 11 agencies' methodology reports—DOD, DOE, EPA, NASA, NSF, and DOT—noted that the agencies excluded some programs from their calculations, but these agencies either did not itemize the specific programs that they excluded, did not specify the reasons why they excluded the programs, or both. In the case of DOD, the agency's report stated that some of its programs were exempted by the section of the Small Business Act described above, which exempts programs in the intelligence community. However, DOD's report does not itemize the specific programs or subunits that were excluded, as required by the policy directives. Also, DOE, EPA, NASA, and NSF provided general categories of exclusions but not particular itemized programs. DOT excluded the research expenditures of the Federal Aviation Administration and the Federal Highway Administration from its extramural R&D budget without explanation in the report about why the programs were excluded.

As we found in our first annual report on these issues, agencies submitted different levels of detail on their methodologies, such as the programs excluded from the extramural budget and the reasons for the exclusions, and SBA did not raise questions about details of the methodologies.[23] SBA officials told us they would like agencies to include more information about exclusions in their methodology reports. In our first annual report, we concluded that, without guidance from SBA, participating agencies are likely to continue to provide SBA with broad, incomplete, or inconsistent information on their methodologies for calculating their extramural R&D budgets. At that time, we recommended that SBA provide additional guidance on the format agencies are to include in their methodology reports, among other issues. As of May 2014, SBA said that a working group of program managers had developed a template for agencies to use to submit their methodology

[22] 15 U.S.C. § 638 (e)(2) (2012).

[23] GAO-13-421.

reports. Agencies will be encouraged to use the template for their fiscal year 2013 submission and required to use it beginning in fiscal year 2014.

Two Agencies Submitted Incorrect Data for the STTR Program

Two agencies—DOD and HHS—submitted incorrect figures to SBA for the size of their extramural R&D budgets for the STTR program for fiscal year 2012.[24] The Small Business Act requires federal agencies to spend a certain amount of their extramural R&D budgets on the SBIR and STTR programs if the agency meets certain thresholds for participation. The threshold for participating in the programs is based on the entire agency's extramural R&D budget and not that of the specific subunits within the agency. Additionally, the extramural R&D budget figures for the SBIR and STTR programs should be consistent because the budget must be calculated the same way for both programs under the act. However, DOD submitted an extramural R&D budget for SBIR that was about $2.7 billion more than its budget for STTR, and HHS submitted an extramural R&D budget for SBIR that was about $337 million more than its budget for STTR. This occurred because the two agencies incorrectly excluded the budgets of subunits within the agencies that spent less than $1 billion per year on extramural R&D from the budget calculation for the STTR program. For example, HHS calculated its extramural R&D budget data for STTR using the amount of the extramural R&D budget of the National Institutes of Health and excluded the extramural R&D funding from the other subunits that participate in the SBIR program—the Centers for Disease Control and Prevention, the Food and Drug Administration, and the Administration for Children and Families—from its calculation.

As a result of the incorrect data, DOD and HHS underestimated their STTR spending requirements by about $9.3 million and $1.2 million, respectively, for fiscal year 2012. Using the correct extramural R&D budget figures did not change our assessment of DOD's or HHS's compliance with spending requirements for fiscal year 2012 because DOD did not meet its spending requirement using the lower extramural R&D budget figure and HHS's spending for the STTR program was high enough that it met its spending requirements even using the higher

[24]These agencies also submitted incorrect figures for their extramural R&D budgets for the STTR program in previous years, as we found in our September 2013 report. Because we determined that the STTR extramural R&D budget figures were incorrect, we used the SBIR extramural R&D budget figures, which were higher than the STTR figures, to determine DOD's and HHS's compliance with STTR spending requirements for this report.

extramural R&D budget amount from its SBIR report. However, since spending requirements are calculated as a percentage of the extramural R&D budget, using an incorrect budget figure could lead to an agency not spending the required amount for the programs in the future. For example, the National Institutes of Health is the only subunit that participated in HHS's STTR program in fiscal year 2012. If the National Institutes of Health had not exceeded the minimum spending requirements for HHS in fiscal year 2012, HHS would not have complied with its agencywide spending requirements.

DOD officials said they were aware of the problem because we identified it in our first annual report, but it was too late for them to correct it for fiscal year 2012. The officials said that they have corrected the problem and plan to use the same extramural R&D budget numbers for the SBIR and STTR programs starting with the data submitted for fiscal year 2013. HHS officials told us they did not correct the budget numbers for fiscal year 2012 because it was too late to do so. However, they also said that they have not corrected this problem for fiscal years 2013 or 2014 because HHS has not received guidance from SBA to do so. SBA officials said they have discussed this issue with HHS. According to SBA's report to Congress for fiscal years 2009 through 2011, SBA and HHS were discussing the appropriate extramural budget figure.

SBA Has Not Submitted Its Annual Report for Fiscal Year 2012

SBA has not issued its report to Congress on the programs for fiscal year 2012. The Small Business Act requires SBA to report to certain congressional committees on the SBIR and STTR programs—including an analysis of the agencies' methodology reports—not less than annually, but the act does not specify a date that the report is due. SBA officials said that they had begun drafting the report for fiscal year 2012 but, early in 2014 two agencies—DOD and EPA—notified SBA that they needed to submit updated data, so SBA postponed its work on the report. According to SBA officials, SBA's report to Congress depends on the timeliness and quality of the participating agencies' submissions to SBA, and they delayed the submission of the last report and the fiscal year 2012 report to provide Congress with more accurate information on the SBIR and STTR programs. SBA officials told us they planned to submit their report for fiscal year 2012 by the end of fiscal year 2014—2 years after the subject fiscal year.

In our first annual report on these issues, we found that SBA had issued reports on 3 of the 6 years covered by our review—2006 through 2008—and those reports contained limited analyses of the agencies' methodologies, and some of the analyses were inaccurate.[25] SBA issued its report to Congress for fiscal years 2009 through 2011 in December 2013, making the data available to Congress about 2 to 4 years after the end of the subject year. In that report, we concluded that, without more rigorous oversight by SBA, and more timely and detailed reporting on the part of both SBA and participating agencies, it will be difficult for SBA to ensure that intended benefits of these programs are being attained and that Congress receives critical information to oversee these programs. Consequently, we recommended that SBA provide Congress with a timely annual report that includes a comprehensive analysis of the methodology each agency used for calculating the SBIR and STTR spending requirements. SBA agreed with our recommendation and stated in its comments on the report that it planned to implement the recommendation. SBA's policy directives for the programs call for agencies to submit their program data to SBA by March 15 each year.[26] However, SBA officials said that they have no enforcement mechanism to ensure that agencies submit their final data by that date. SBA introduced a scorecard in its report to Congress for fiscal years 2009 through 2011 to document agencies' timeliness in submitting data for fiscal year 2011. SBA officials expect that publishing the information in the report to Congress will encourage the agencies to submit their data on time, which, according to the officials, should improve SBA's timeliness in reporting to Congress.

[25]GAO-13-421.

[26]According to SBA officials, they extended the deadline for fiscal year 2013 data submissions. As of May 2014, SBA officials expected that agencies would submit their data for fiscal year 2013 in June 2014.

Changing the Calculation Methodology Could Increase Spending Requirements and Participation, with Potential Benefits and Drawbacks

Potential effects of basing each participating agency's spending requirement on its total R&D budget instead of its extramural R&D budget include an increase in the amount of the spending requirement—for some agencies more than others—and, if the thresholds for participation in the programs did not change, an increase in the number of agencies required to participate. Agency officials identified some benefits and drawbacks of changing the methodology for calculating the spending requirements for the SBIR and STTR programs.

Changing the Calculation Methodology Could Increase Spending Requirements and Participation in the Programs

If the methodology for calculating the spending requirements had been changed so that the same percentages and thresholds for participating in the programs as under current law were applied to an agency's total R&D budget rather than to its extramural R&D budget in fiscal year 2012, all but one agency would have been required to spend more than under current law, according to our analysis of budget data and data submitted to SBA.[27] The change would have had this effect because an agency's extramural R&D budget is a part of and, therefore, smaller than its total R&D budget, and the same percentages would have been applied to a larger amount of funding. Figure 3 shows a comparison of the agencies' spending requirements for the SBIR and STTR programs in fiscal year 2012 under the current law, based on an agency's extramural R&D budget, and this alternative methodology. These figures are generally consistent with the findings in our first annual report on these issues.

[27]NSF's total R&D budget authority in the *Analytical Perspectives* volume of the President's budget is less than its extramural R&D budget data submitted to SBA for fiscal year 2012 because the data are drawn from different sources, according to NSF officials. NSF officials said that the amount reported in the *Analytical Perspectives* is based only on the actual budget authority for that particular year, while the amount submitted to SBA is based on total obligations resulting from budget authority provided in previous years.

Figure 3: Comparison of Fiscal Year 2012 Spending Requirements under the Current Law and an Alternative Scenario Based on Agencies' Total Research and Development Budgets

Agency	Agency's budget		Small Business Innovation Research Program			Small Business Technology Transfer Program		
Dollars in millions	Total research and development budget[a]	Extramural research or research and development budget[b]	Spending requirement under current law[c]	Spending requirement under alternative scenario[d]	Percentage difference between current law and alternative scenario	Spending requirement under current law[e]	Spending requirement under alternative scenario[f]	Percentage difference between current law and alternative scenario
DOD	$72,811	$38,816	$1,009	$1,893	88%	$136	$255	88%
HHS	31,209	24,763	644	811	26	87	109	26
NASA	11,175	5,728	149	291	95	20	39	95
DOE	9,942	6,143	160	258	62	22	35	62
NSF	5,101	5,111	133	133	0[g]	18	18	0[g]
USDA	2,242	746	19	58	200	[h]	8	[h]
Veterans Affairs	1,160	[h]	[h]	30	[h]	[h]	4	[h]
Commerce	1,023	175	5	27	485	[h]	4	[h]
DOT	896	330	9	23	172	[i]	[i]	[i]
Interior	817	[h]	[h]	21	[h]	[i]	[i]	[i]
EPA	563	174	5	15	223	[i]	[i]	[i]
Education	397	327	8	10	22	[i]	[i]	[i]
DHS	384	322	8	10	19	[i]	[i]	[i]
Total	**$137,720**	**$82,634**	**$2,148**	**$3,581**	**67%**	**$282**	**$471**	**67%**

Agency did not participate in the program in fiscal year 2012, but it would be required to do so if participation was based on the total research and development budget, and the thresholds for participating in the programs remained the same.

Sources: GAO analysis of agency data. | GAO-14-431

Note: Calculations may be affected by rounding.

[a]Each agency's total research and development budget authority is from the *Analytical Perspectives* volume of the President's budget. The category of "Facilities and Equipment" is not included in the total shown in this table.

[b]Each agency's extramural research or research and development (R&D) budget is the amount the agency submitted to SBA.

[c]Each agency's spending requirement under the current law for the Small Business Innovation Research (SBIR) program is calculated as 2.6 percent of its extramural R&D budget.

[d]Each agency's SBIR spending requirement under the alternative scenario is calculated as 2.6 percent of the total research and development budget authority and assumes no reductions for excluded programs.

[e]Each agency's spending requirement under the current law for the Small Business Technology Transfer (STTR) program is calculated as 0.35 percent of its extramural R&D budget.

[f]Each agency's STTR spending requirement under the alternative scenario is calculated as 0.35 percent of the total research and development budget authority and assumes no reductions for excluded programs.

[g]NSF's total research and development budget authority is less than its extramural R&D budget due to differences in the sources of data, according to NSF officials. NSF officials said that the amount reported in the *Analytical Perspectives* is based only on the actual budget authority for that particular year, while the amount submitted to SBA is based on total obligations resulting from budget authority provided in previous years.

[h]Agency did not participate in the program in fiscal year 2012.

[i]The agency's total research and development budget authority did not meet the threshold for participating in the STTR program for this alternative scenario.

As shown in figure 3, some agencies' spending requirements would increase more than others' under the alternative scenario. This variation is due to differences in the relative proportions of the extramural and intramural R&D budgets among agencies. Under the alternative scenario, agencies with a larger proportion of their total R&D budget for extramural R&D would experience a smaller increase in their spending requirements relative to the other agencies, as discussed in the following examples:

- DHS used about 84 percent of its total R&D budget for extramural R&D in fiscal year 2012 and was required to spend about $8 million on its SBIR program in that year. The agency would have a relatively small increase in its SBIR spending if the spending requirement were based on its total R&D budget instead of its extramural R&D budget: DHS would have been required to spend about $2 million more in fiscal year 2012 if the calculation methodology changed.
- The Department of Commerce used a relatively small percentage of its total R&D budget—about 17 percent—for extramural R&D in fiscal year 2012, and its spending requirement for SBIR would have increased more than five times, from about $5 million to $27 million in fiscal year 2012 if the calculation methodology had changed. While Commerce did not participate in the STTR program in fiscal year 2012, it would have been required to participate in the STTR program if the calculation methodology had changed and the thresholds for participating in the program had remained the same. Its spending requirement for the STTR program would have been $4 million rather than $0. Consequently, if the funding percentage required in law in fiscal year 2012 applied to the total R&D budget instead of the extramural budget, Commerce's SBIR and STTR spending would have increased by a total of about $26 million.

Changing the calculation methodology to the total R&D budget instead of the extramural R&D budget would also increase the number of agencies that would be required to participate in the SBIR and STTR programs, assuming the dollar thresholds for participating in the programs remained the same. Two additional agencies—the Departments of Veterans Affairs and the Interior—would have been required to participate in the SBIR program in fiscal year 2012 if the dollar thresholds for participating in the programs applied to the total R&D budgets.[28] Adding these two agencies to the other agencies that participated in the SBIR program in fiscal year 2012 would have increased total federal SBIR spending requirements by about $51 million, in addition to the increased spending requirements for the other agencies. For STTR, three additional agencies—Commerce, USDA, and the Department of Veterans Affairs—would have been required to participate in the STTR program for fiscal year 2012 if the dollar thresholds for participating in the programs were applied to the total R&D budgets.[29] Adding these three agencies to the other agencies that participated in the STTR program in fiscal year 2012 would have increased total federal STTR spending requirements by about $16 million, in addition to the increased spending requirements for the other agencies.

We recognize that other scenarios could have different effects on the spending requirements. For example, basing the SBIR and STTR spending requirement on an agency's total R&D budget and applying a lower percentage than under current law could result in reduced spending requirements for some agencies. Specifically, if the percentage applied to the total R&D budget had been 1.5 percent instead of 2.6 percent, and the thresholds for participating in the programs had remained the same, the spending requirement for the total SBIR programs would have slightly decreased in fiscal year 2012.[30] Using this lower percentage, the spending requirements for some agencies, such as Commerce and DOD, would have increased, while the spending requirements for other agencies, such as DHS and NSF, would have decreased.

[28]Based on data in the President's budget, these two agencies had total R&D budget authority in excess of $100 million; federal agencies with a budget of $100 million or more for extramural R&D are required to establish and operate an SBIR program.

[29]These agencies reported total R&D budget authority in excess of $1 billion; federal agencies with budgets of $1 billion or more for extramural R&D are required to establish and operate an STTR program.

[30]We selected 1.5 percent as an alternative percentage because it is roughly equal to the average of the agencies' spending requirements for fiscal year 2012 as a percentage of the total R&D budgets.

Program Managers Identified Benefits and Drawbacks of Changing the Calculation Methodology

Program managers identified benefits and drawbacks that basing the methodology for calculating the spending requirements on the total R&D budget could have for their agencies' programs. For example, several program managers indicated that more funding for the programs would allow their agencies to fund more projects, which was viewed as a benefit because the agencies tend to receive more proposals than they can fund in a year under current budgets. Additionally, several program managers told us that basing the SBIR and STTR spending requirements on the total R&D budget could improve transparency and reduce complexity in determining the SBIR and STTR spending requirements because the agencies would no longer need to identify the extramural portion of their R&D budgets, which the agencies have to determine internally. Similarly, program managers at some agencies said that the calculation to determine the agency's extramural R&D budget can be complex or difficult and that avoiding it would save time and effort, which would be a benefit.

Program managers also identified drawbacks to changing the methodology for calculating the spending requirements, with most program managers indicating that the potential drawbacks of such a change could outweigh the benefits. For example, most program managers said that increasing the amount of funding for the SBIR and STTR programs could be a drawback because funding used to support the agency's other R&D efforts would have to be spent on the SBIR and STTR programs. In addition, most program managers said that changing the methodology for calculating spending requirements for these programs could affect agency operations, depending on how the change is implemented within the agency. For example, several program managers said that basing spending requirements on the total R&D budget could increase SBIR and STTR budgets, which may lead to a decision within the agency to reduce intramural R&D programs and, in turn, lead to reductions in staffing of these programs. Most program managers also said that basing spending requirements on the total R&D budget could mean shifting money from other extramural R&D projects currently funded within the agency to SBIR and STTR.

Little Information Is Known About Total Administrative Costs

Little is known about the total amounts agencies spent administering the SBIR and STTR programs because agencies do not consistently collect such information. Agencies are not required to track or estimate all costs for administering the programs. In response to our requests to agencies for data on their fiscal year 2012 administrative costs, most agencies provided information on some categories of administrative costs and partial estimates of costs.[31] Agencies provided information on several types of administrative costs, such as staff, contractor, and travel costs for preparing and awarding contracts and grants and for monitoring them. Administrative cost estimates that the agencies provided for fiscal year 2012 ranged from about $200,000 to about $8 million. As with the data on fiscal year 2011 for our first annual report, these data were wide-ranging, incomplete, and unverifiable.

The 2011 reauthorization of the programs created a pilot program beginning in fiscal year 2013 that allows agencies to spend up to 3 percent of SBIR funds for administrative costs of the programs beginning in fiscal year 2013. The SBIR policy directive requires agencies to submit information to SBA on the funding used for administrative costs through the pilot program. As such, we anticipate that agencies that participate in the pilot program will have additional information on administrative costs for fiscal year 2013, which we will examine in our next annual review of the programs. As of May 2014, SBA officials expected that agencies would submit their data for fiscal year 2013 in June 2014. According to SBA's policy directives, funding under the pilot program must not replace current agency administrative funding for SBIR. Consequently, even with the pilot program, agencies will likely not identify or track all administrative costs for SBIR.

Conclusions

Federal agencies have awarded billions of dollars to small businesses under the SBIR and STTR programs to develop and commercialize innovative technologies. In our first annual report on these issues, we identified some areas where SBA could take actions to ensure that agencies comply with spending and reporting requirements. Our report was issued in September 2013, after agencies' fiscal year 2012 data and reports were due to SBA, and, as a result, some of the issues we

[31]One additional agency—Commerce —provided administrative cost data for fiscal year 2012 that did not provide data for previous years. However officials at two agencies, HHS and DOD, said they could not provide administrative costs for fiscal year 2012. HHS officials said it would be very difficult to determine how much is spent on the administrative costs of the program since such funding for salaries, expenses, training, and travel, comes from accounts other than the SBIR and STTR programs. DOD officials said they do not have an estimate of administrative costs largely because thousands of employees throughout the department are involved with the SBIR and STTR programs and DOD does not have the ability to track the percentage of these employees' workload to support the two programs. HHS did not provide an estimate for fiscal year 2011 for our last report, but DOD provided an estimate of about $30 million for fiscal year 2011.

identified in the data and reports for fiscal years 2006 through 2011 remained in fiscal year 2012. For example, in our prior report, we found that the agencies submitted different levels of detail in their methodology reports, such as the programs excluded from the extramural R&D budget and the reasons for the exclusions. In that report, we recommended that the SBA Administrator provide the format for agencies to include in their methodology reports and to provide timely annual feedback to agencies on whether their methodology calculations for extramural R&D budgets comply with program requirements. We found similar issues with agencies' reports for fiscal year 2012 and continue to believe that this oversight is needed and that the recommendation is valid and should be fully implemented. Additionally, as part of its oversight role, SBA is required to provide Congress with annual reports on the SBIR and STTR programs. However, SBA has faced challenges in submitting its report in a timely manner—particularly with agencies revising their data submissions well after the fiscal year is over—leading to reports that are submitted between 2 and 4 years after the subject year. In our September 2013 report, we recommended that SBA provide Congress with a timely annual report that includes a comprehensive analysis of the methodology each agency used for calculating the SBIR and STTR spending requirements. We continue to believe that providing a timely report to Congress is important and that the recommendation continues to have merit and should be fully implemented. Moreover, such a report could demonstrate SBA's oversight to help ensure that the programs are meeting their intended goals.

In addition to those issues that could be addressed by implementing our prior recommendations, we identified four additional issues that—if left unaddressed—could affect compliance with spending and reporting requirements in the future. First, some agencies did not comply with the requirement to spend program funds annually because SBA's policy directives inaccurately summarize the requirement. Without correct information in the policy directives, such misinterpretations could lead to agencies spending less than required. Second, agencies did not report the total amounts spent on the programs because SBA has not provided guidance on whether or how to submit information on spending for reasons other than awards, such as technical assistance. As a result, Congress does not have access to complete and accurate information on the amounts spent on the programs. Third, agencies have continued to submit their methodology reports to SBA significantly later than required by law. In fiscal year 2012, most agencies submitted their methodology reports more than a year after the deadline established in the Small Business Act. Without holding agencies to the deadlines in the law, SBA did not have an opportunity to perform timely oversight by analyzing these methodologies and providing the agencies with feedback, if needed, to correct problems with the calculations and help to ensure that agencies meet mandated spending requirements. Fourth, two agencies have calculated their extramural R&D budgets for the STTR program incorrectly. DOD officials told us that they will use the same extramural R&D budget figure for both programs moving forward, but HHS officials do not plan to do so. Using the wrong figure could lead to spending less than the required amount for the programs in the future.

Recommendations for Executive Action

To improve compliance with the Small Business Act and enhance SBA's ability to provide oversight of the programs, we recommend that the SBA Administrator take the following three actions:

- Revise the language in the SBIR and STTR policy directives to accurately summarize the statutory provisions that describe the program spending requirements.
- Provide written guidance to agencies clarifying whether and how agencies should submit data to SBA on spending outside of awards that is allowed under the programs, such as discretionary technical assistance.
- Request that the agencies submit their methodology reports within 4 months of the enactment of appropriations, as required by the Small Business Act and the program policy directives.

To help ensure that the agency continues to spend the required amount for the STTR program, we recommend that the Secretary of Health and Human Services include all of the agency's extramural R&D budget in the calculation of STTR spending requirements and in the data submitted to SBA.

Agency Comments and Our Evaluation

We provided a draft of this report to the Secretaries of Health and Human Services, Agriculture, Commerce, Defense, Education, Energy, Homeland Security, and Transportation; the Administrators of the Small Business Administration, the Environmental Protection Agency, and the National Aeronautics and Space Administration; and the Director of the National Science Foundation for review and comment. In response, six of the agencies—Commerce, Education, DOE, DHS, DOT, and EPA—stated by email that they had no technical or written comments. Two agencies—NASA and NSF—provided technical comments by e-mail but did not provide formal written comments. We incorporated these technical comments, as appropriate. The remaining four agencies—SBA, HHS, USDA, and DOD—provided written comments, which are reproduced in appendixes IV through VII and discussed below.

In written comments, reproduced in appendix IV, SBA generally agreed with the issues and recommendations included in our report. The letter states that SBA does not believe that the policy directive inaccurately summarizes the law and that the use of the term "reserve" refers to the allocation of the extramural budget. SBA officials plan to start using the term "extramural obligations" instead of "extramural budget" to address confusion with participating agencies, but they will review all language in the policy directives to ensure that the funding requirements are clear. SBA's proposed change could help address some confusion among participating agencies, but we continue to believe that SBA should implement our first recommendation to revise the language in the SBIR and STTR policy directives to accurately summarize the statutory provisions that describe the program spending requirements. Specifically, the policy directives currently say that the relevant statutory provision requires participating agencies to "reserve" a minimum percentage of their extramural budget for awards to small businesses each year, whereas the law requires participating agencies to "expend" the minimum percentages. As reflected in USDA's agency comments (see app. VI), the use of the term "reserve" is a specific point of confusion for at least one of the participating agencies.

In written comments, reproduced in appendix V, HHS concurred with our recommendation regarding the inclusion of all of the agency's extramural R&D budget in the calculation of the STTR spending requirements and in the data submitted to SBA. HHS plans to ensure that the agency's extramural R&D budget is calculated the same way for the SBIR and STTR programs beginning in fiscal year 2015, as funding for the programs in fiscal year 2014 is already under way.

In written comments, reproduced in appendix VI, USDA's Director of the National Institute of Food and Agriculture, stated that USDA generally agrees with our report, but the agency does not agree that it did not comply with the spending requirements for the SBIR program. USDA's written comments state that USDA has not always obligated the minimum percentage of its extramural R&D budget for the SBIR program in a single fiscal year because some of the funds used for the program are available without fiscal year limitations, referred to as "no-year money." USDA's written comments explain that USDA did not obligate the required amounts due to the language in the program policy directive, which directs federal agencies to “reserve” the minimum percentage of their extramural R&D budgets for awards to small business concerns. This is consistent with what officials told as during our review. We recognize that agencies with multiyear appropriations are generally allowed to carry funds over from one year to the next and that there are benefits to doing so, but we continue to believe that the Small Business Act requires participating agencies to spend at least the minimum percentage of their extramural R&D budgets on the program each year, regardless of the year the dollars spent were appropriated. In other words, an agency can use a mix of funds from different fiscal years, consistent with the limitations specific to its appropriations, to meet the spending requirement in any given fiscal year, but it must still meet the spending requirement in each fiscal year. Conversely, as we state in the report, if an agency carries over funding from one year to the next without spending, or at least obligating, the minimum required amount on the program in each fiscal year, then the agency is not in compliance with spending requirements. As noted above, we continue to believe that a change to the program policy directives is needed to address this misinterpretation of the spending requirements.

In written comments, reproduced in appendix VII, the DOD Administrator for the SBIR and STTR programs stated that DOD concurs with our finding that DOD does not expend all SBIR and STTR funds appropriated to the department in the same fiscal year that they are received, but DOD believes that the agency is in compliance with the law in that it obligates the minimum percentage of SBIR and STTR funds each year in accordance with the obligation authority conferred by Congress and long-standing DOD procedures. We neither state in the report, nor do we believe, that agencies are required to spend all of the SBIR or STTR funds appropriated in the same year that they are received. As we state in the report, we used the total obligations data that agencies submitted to SBA to calculate compliance with spending requirements. These data represent the amount obligated in a specific year, regardless of the year the funding was appropriated. Additionally, we agree that an agency is in compliance with program spending requirements if it obligates the minimum percentage of program funds each year. However, using the spending data that DOD submitted to SBA for fiscal year 2012, DOD did not comply with the spending requirements for the STTR program.

We are sending copies of this report to the Secretaries of Health and Human Services, Agriculture, Commerce, Defense, Education, Energy, Homeland Security, and Transportation; the Administrators of the Small

Business Administration, the Environmental Protection Agency, and the National Aeronautics and Space Administration; the Director of the National Science Foundation; the appropriate 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 staff members have any questions about this report, please contact me at (202) 512-3841 or ruscof@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 VIII.

Frank Rusco

Frank Rusco
Director, Natural Resources and Environment

List of Committees

The Honorable Maria Cantwell
Chairwoman
The Honorable James E. Risch
Ranking Member
Committee on Small Business & Entrepreneurship
United States Senate

The Honorable Lamar Smith
Chairman
The Honorable Eddie Bernice Johnson
Ranking Member
Committee on Science, Space and Technology
House of Representatives

The Honorable Sam Graves
Chairman
The Honorable Nydia M. Velázquez
Ranking Member
Committee on Small Business
House of Representatives

Appendix I: Agencies' Compliance with Spending Requirements for the Small Business Innovation Research Program for Fiscal Year 2012

Our analysis of the data that the agencies submitted to the Small Business Administration (SBA) indicate that the amounts that 8 of the 11 participating agencies spent for the Small Business Innovation Research (SBIR) program met or exceeded their fiscal year 2012 spending requirements, while spending for the remaining 3 agencies did not meet the requirements. See table 2 for data on agency compliance.

Table 2: Agency Compliance with Small Business Innovation Research (SBIR) Program Spending Requirements for Fiscal Year 2012

Dollars in millions

Agency	Extramural research or research and development (R&D) budget	Amount spent[a]	Calculated spending requirement[b]	Difference between amount spent and spending requirement	Percentage of extramural R&D budget spent for SBIR
Department of Defense (DOD)	$38,816	$1,080.3	$ 1,009.2	$ 71.1	2.8%
Department of Health and Human Services (HHS)	24,763	648.6[c]	643.8	4.7	2.6%
Department of Energy (DOE)	6,143	169. 8[c]	159.7	10.1	2.8%
National Aeronautics and Space Administration (NASA)	5,728	140.0	148.9	(9.0)	2.4%
National Science Foundation (NSF)	5,111	131.3	132. 9	(1.6)[d]	2.6%
U.S. Department of Agriculture (USDA)	746	16.9	19.4	(2.5)	2.3%
Department of Education (Education)	327	13.1	8.5	4.6	4.0%
Department of Homeland Security (DHS)	322	12.9	8.4	4.5	4.0%
Department of Transportation (DOT)	330	9.1	8.6	0.6	2.8%
Department of Commerce (Commerce)	175	4.5	4.5[e]	(0.0)[d]	2.6%
Environmental Protection Agency (EPA)	174	4.3[c]	4.5	(0.2)	2.5%
Total	**$82,634**	**$2,230.7**	**$2,148.5**	**$82.3**	**2.7%**

Source: GAO analysis of agency data reported to SBA.

Notes: Calculations may be affected by rounding.

Cells shaded gray indicate the agency did not meet its spending requirement in fiscal year 2012.

[a]The amount spent is the total obligations that the agency submitted to the Small Business Administration (SBA).

[b]We calculated the spending requirement as 2.6 percent of the agency's extramural R&D budget.

[c]Three agencies—DOE, EPA, and HHS—provided us revised spending data for fiscal year 2012 based on adding in their funding for discretionary technical assistance. We did not include the revised

data in our analysis because we used the data that agencies submitted to SBA and the agencies had not provided the updated data to SBA at the time of our review.

[d] If an agency's spending for the SBIR program as a percentage of its extramural R&D budget was within a rounding error of the required level, we considered that agency to be in compliance with the spending requirement. This was the case with NSF and Commerce. In the latter case, the amount spent was slightly below $4.5 million.

[e] Officials from one subunit within Commerce—the National Institute of Standards and Technology—said that they calculate the spending requirement for the program based on its actual spending on extramural R&D for the previous fiscal year, rather than the extramural R&D budget for the current fiscal year, but did not report this figure to SBA. We used the data that Commerce submitted to SBA to calculate its spending requirements.

Appendix II: Agencies' Compliance with Spending Requirements for the Small Business Technology Transfer Program for Fiscal Year 2012

Our analysis of the data that the agencies submitted to the Small Business Administration (SBA) indicate that two of the five agencies participating in the Small Business Technology Transfer (STTR) program met or exceeded their fiscal year 2012 spending requirements, while the remaining three agencies did not. See table 3 for data on agency compliance.

Table 3: Agency Compliance with Small Business Technology Transfer (STTR) Program Spending Requirements for Fiscal Year 2012

Dollars in millions

Agency	Extramural research or research and development (R&D) budget	Amount spent[a]	Calculated spending requirement[b]	Difference between amount spent and spending requirement	Percentage of extramural R&D budget spent for STTR
Department of Defense (DOD)	$38,816[c]	$118.8	$135.9	$(17.0)	0.31%
Department of Health and Human Services (HHS)	24,763[c]	86.9	86.7	0.3	0.35%
Department of Energy (DOE)	6,143	23.5	21.5	2.0	0.38%
National Space and Aeronautics Administration (NASA)	5,728	18.5	20.0	(1.5)	0.32%
National Science Foundation (NSF)	5,111	15.6	17.9	(2.3)	0.30%
Total	**$80,560**	**$ 263.3**	**$282.0**	**$(18.6)**	**0.32%**

Source: GAO analysis of agency data reported to SBA.

Notes: Calculations may be affected by rounding.

Cells shaded gray indicate the agency did not meet its spending requirement in fiscal year 2012.

[a]The amount spent is the total obligations that the agency submitted to the Small Business Administration (SBA).

[b]We calculated the spending requirement as 0.35 percent of the agency's extramural R&D budget.

[c]We found that two agencies—DOD and HHS—submitted different figures to SBA for their extramural R&D budgets for the SBIR and STTR programs for fiscal year 2012. The difference in the extramural R&D budget figures would not have affected our assessment of DOD's or HHS's compliance with spending requirements for fiscal year 2012. Specifically, DOD did not meet its STTR spending requirements using either the higher or lower extramural R&D budget figures, and HHS's spending for the STTR program was high enough that it met its spending requirements even using the higher figure. Because we determined that the STTR extramural R&D budget figures were incorrect for DOD and HHS, we used the SBIR extramural R&D budget figures to determine DOD's and HHS's compliance with STTR spending requirements for this report.

Appendix III: Affect of Different Methodologies on Calculation of Department of Defense Spending for Fiscal Years 2006 through 2011

Differences in how agencies interpret the spending requirements for the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs can lead to different results when calculating compliance with spending requirements. To demonstrate the effect that these differences can have, we made the following calculations for the Department of Defense (DOD). First, we used the methodology we used for this report, as well as our first annual report on these issues, in which we compared the agency's spending in each year to the spending requirements for that year. Second, we used the methodology that DOD uses to calculate its spending. DOD calculates its spending for the year as the funding that was appropriated in one year and spent in the same year and the following year. For example, for fiscal year 2006, DOD calculated its spending as the sum of the funding appropriated in fiscal year 2006 and spent in fiscal year 2006 and the funding appropriated in fiscal year 2006 and spent in fiscal year 2007. We used DOD for this comparison because DOD is the only agency that submits its spending data to the Small Business Administration (SBA) in a way that allows us to determine the year that funding was appropriated and spent.[1] We found that DOD complied with SBIR spending requirements in 2 of the 6 fiscal years from 2006 to 2011 and with STTR spending requirements in 4 of the 6 years using our method. DOD's method is incorrect, but if it were correct, it would yield a compliance determination in each of the 6 years for both the SBIR and STTR programs (see tables 4 and 5).

[1]We could not perform the analysis for DOD's fiscal year 2012 data because the amount of DOD's fiscal year 2012 appropriations that were obligated in fiscal year 2013 will be included in DOD's fiscal year 2013 data submission to SBA, which had not yet been submitted at the time of our review. Agencies' data submissions are typically due to SBA in the March following the end of the fiscal year, but SBA officials said they are extending the deadline for the fiscal year 2013 data submissions.

Table 4: Comparison of GAO and DOD Calculations for Small Business Innovation Research (SBIR) Program Spending for Fiscal Years 2006 through 2011

Dollars in millions

			GAO's method		DOD's method	
Year	Extramural research or research and development (R&D) budget	Spending requirement[a]	Dollars spent	Spending as a percentage of extramural R&D budget	Dollars spent	Spending as a percentage of extramural R&D budget
2006	$45,437	$1,136	$1,159	2.6%	$1,196	2.6%
2007	46,782	1,170	1,107	2.4%	1,218	2.6%
2008	46,857	1,171	1,101	2.4%	1,230	2.6%
2009	48,884	1,222	1,150	2.4%	1,251	2.6%
2010	47,955	1,199	1,154	2.4%	1,241	2.6%
2011	$41,678	$1,042	$1,082	2.6%	$1,081	2.6%

Source: GAO analysis of agency data reported to the Small Business Administration (SBA).

Notes: Calculations may be affected by rounding.

Cells shaded gray indicate the agency did not meet its spending requirement.

These figures may differ from the figures presented in SBA's report to Congress for fiscal years 2009 through 2011 because DOD submitted updated to data to SBA after it provided the data to us and we needed the level of detail in the agency's data to SBA to perform the analysis.

[a]The spending requirement for fiscal years 2006 through 2011 was 2.5 percent of the extramural R&D budget.

Table 5: Comparison of GAO and DOD Calculations for Small Business Technology Transfer (STTR) Program Spending for Fiscal Years 2006 through 2011

Dollars in millions

			GAO's method		DOD's method	
Year	Extramural research or research and development (R&D) budget	Spending requirement[a]	Dollars spent	Spending as a percentage of extramural R&D budget	Dollars spent	Spending as a percentage of extramural R&D budget
2006	$45,437	$130.9	$134.3	0.31%	$133.0	0.31%
2007	46,782	134.1	134.8	0.31%	137.7	0.31%
2008	46,857	133.8	116.9	0.26%	139.2	0.31%
2009	48,884	139.1	136.0	0.29%	137.2	0.30%
2010	47,955	135.2	149.6	0.33%	138.0	0.31%
2011	$41,678	$117.7	$120.9	0.31%	$122.6	0.31%

Source: GAO analysis of agency data reported to the Small Business Administration (SBA).

Notes: Calculations may be affected by rounding.

Cells shaded gray indicate the agency did not meet its spending requirement.

These figures may differ from the figures presented in SBA's report to Congress for fiscal years 2009 through 2011 because DOD submitted updated to data to SBA after it provided the data to us and we needed the level of detail in the agency's data to SBA to perform the analysis.

[a]The spending requirement for fiscal years 2006 through 2011 was 0.3 percent of the extramural R&D budget. Unlike the assessment in the body of the report, we used the extramural R&D budget figure DOD submitted for the STTR program because that was the amount the agency planned to spend for the year.

Appendix IV: Comments from the Small Business Administration

U.S. SMALL BUSINESS ADMINISTRATION
WASHINGTON, DC 20416

May 23, 2014

Frank Rusco
Director
Natural Resources and Environment
U.S. Government Accountability Office
Washington, DC 20548

Dear Mr. Rusco:

Thank you for providing the U.S. Small Business Administration (SBA) with a copy of the Government Accountability Office (GAO) report titled "*Small Business Research Programs: More Guidance and Oversight Needed to Comply with Spending and Reporting Requirements*." In this report, GAO identifies several issues and inconsistencies with the current reporting on SBIR/STTR program funding compliance. GAO recommends that SBA revise program policy directives and provide additional guidance on program funding requirements.

SBA generally agrees with the issues and recommendations provided in the GAO report. However, SBA notes the following:

- Page 10 of the GAO report indicates that some agencies assert they "comply with spending requirements if the agencies spend the total amount reserved or budgeted for the program, regardless of the year the funding is spent." GAO found that "these two agencies did not implement the annual spending requirements as written in the Small Business Act, in part because SBA's SBIR and STTR policy directives inaccurately summarize the law." We do not believe that our policy directive inaccurately summarizes the law. SBA's policy directive clearly defines extramural budget as obligations, per the statutory definition. SBA's use of the term "reserve" in the policy directive refers to the allocation of "extramural budget" (again defined as obligations per statute). SBA believes that the statutory term "extramural budget" is the more predominant reason for agencies seeking to use "budget" versus obligations in complying with spending requirements. Recognizing that the term "extramural budget" may be confusing to some participating agencies, SBA has provided further clarification to all agencies that SBA looks at obligations in each fiscal year regardless of the year the money was appropriated. SBA intends to begin utilizing the term "extramural obligations" to help reduce any further confusion caused by the statutory term. However, SBA will review all language in its policy directive to ensure that the SBIR and STTR funding requirements are clear.

- SBA is currently clarifying its reporting requirements regarding agency compliance with the minimum funding requirements. SBA is asking agencies to report their total *extramural obligations* beginning with the FY2013 Annual Report. The revised reporting will be fully in place for the FY2014 Annual Report. These clarifications will allow SBA to report for each fiscal year, the total program obligations that were made during that year as a percent of total extramural obligations made during that year. Agency budget and funding processes will necessarily continue to vary across agencies due to differences in administrative structures, but all participating agencies will be held to a consistent, measureable metric of funding compliance calculated upon the completion of each fiscal year.

Thank you for the opportunity to comment on this report and for taking our views into consideration.

Sincerely,

Pravina Raghavan
Deputy Associate Administrator for Investment
Office of Investment and Innovation

Appendix V: Comments from the Department of Health and Human Services

DEPARTMENT OF HEALTH & HUMAN SERVICES

OFFICE OF THE SECRETARY

Assistant Secretary for Legislation
Washington, DC 20201

MAY 21 2014

Frank Rusco, Director
Natural Resources Environment
U.S. Government Accountability Office
441 G Street NW
Washington, DC 20548

Dear Mr. Rusco:

Attached are comments on the U.S. Government Accountability Office's (GAO) report entitled, "Small Business Research Programs: More Guidance and Oversight Needed to Comply with Spending and Reporting Requirements" (GAO-14-431).

The Department appreciates the opportunity to review this report prior to publication.

Sincerely,

Jim R. Esquea

Jim R. Esquea
Assistant Secretary for Legislation

Attachment

GENERAL COMMENTS OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS) ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S (GAO) DRAFT REPORT ENTITLED, "SMALL BUSINESS RESEARCH PROGRAMS: MORE GUIDANCE AND OVERSIGHT NEEDED TO COMPLY WITH SPENDING AND REPORTING REQUIREMENTS" (GAO-14-431)

The Department appreciates the opportunity to review and comment on this draft report.

GAO Recommendation: To help ensure that the agency continues to spend the required amount for the STTR program, we recommend that the Secretary of Health and Human Services include all of the agency's extramural R&D budget in the calculation of STTR spending requirements and in the data submitted to SBA.

HHS Response: HHS concurs with GAO's finding and corresponding recommendation regarding inclusion of all of the agency's extramural R&D budget in the calculation of STTR spending requirements and in the data submitted to SBA.

HHS will ensure the agency extramural R&D budget calculation is the same for SBIR and STTR in all future Annual Reports (FY 2015 and beyond, as FY 2014 funding is already under way). Additionally, HHS will adjust its STTR set-aside calculation appropriately to ensure continued compliance with the spending requirements starting in FY 2015. Additionally, HHS will ensure that this update is reflected in its methodology narrative included in the annual report submitted to SBA.

1

Appendix VI: Comments from the Department of Agriculture

USDA

United States Department of Agriculture

Research, Education, and Economics

National Institute of Food and Agriculture

1400 Independence Avenue SW
Washington, DC 20250

MAY 2 7 2014

Mr. Frank Rusco
Director, Natural Resources and Environment
U.S. Government Accountability Office
Washington, DC 20548

Dear Mr. Rusco:

The U.S. Department of Agriculture (USDA) appreciates the opportunity to respond to the U.S. Government Accountability Office (GAO) draft report "*Small Business Research Programs: More Guidance and Oversight Needed to Comply with Spending and Reporting Requirements (*GAO-14-431)" dated June 2014.

USDA generally agrees with the findings in the GAO final draft report; however, USDA does not agree that it did not comply with the spending requirements of the Small Business Innovation Research (SBIR) program as set forth in Small Business Act (15 U.S.C. 638). We would like to provide the following comments, in addition to technical comments previously provided to GAO.

The Small Business Innovation Research (SBIR) program was, in part, established to address the difficulty high tech small business firms encountered when competing for federal Research & Development (R&D) funds. The SBIR program is administered in a coordinated manner government-wide. All Federal agencies with an extramural R&D budget over $100,000,000 must expend a certain percentage of fiscal year funds on small business concerns.

The draft report indicates that USDA was among one of the 11 participating agencies that did not meet the SBIR spending requirement for fiscal year (FY) 2012. GAO determined that agencies were compliant with the SBIR as "spending at least 2.6 percent of an agency's extramural R&D budget on the SBIR program in fiscal year 2012." USDA reserved 2.6 percent of FY 2012 funds for SBIR program use; however, the funds were not all obligated in FY 2012 as some were carried over for obligation in FY 2013. USDA did not obligate the required percentage of its extramural R&D budget in FY 2012 due to the language in the Small Business Administration's (SBA) Policy Directive and the spending authority of the dollars NIFA dedicated to the SBIR program. USDA has always spent the required percentage of its extramural R&D budget on the SBIR program; however, the funds are not always obligated in the same fiscal year but may be carried over for obligation in the following year. The attached spreadsheet provides details on how NIFA has obligated its SBIR funds.

The SBA Policy Directive, required by 15 U.S.C. 638(j), summarizes the statutory provisions of the Small Business Act and directs applicable Federal agencies to "reserve the … minimum percentage of their extramural R/R&D budget for awards to small business concerns." USDA

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Mr. Frank Rusco
Page 2

has consistently reserved the minimum required percentage of its extramural R&D budget for the SBIR program.

USDA has not always obligated the minimum required percentage of its extramural R&D budget for the SBIR program in a single fiscal year because the funding authority of the money is no-year and funds are available for obligation without fiscal year limitation.

One of the sources of USDA extramural R&D funds that supports the SBIR program is the primary extramural R&D program, the Agriculture Food Research Initiative (AFRI). Approximately $7 million of the annual SBIR funds come from AFRI. AFRI program funds "shall remain available until expended," and are thus, no-year funds. (Consolidated Appropriations Act, 2014; Pub. L. 113-76). Previous appropriations legislation has provided similar no-year funding authority. There are ten different USDA extramural R&D programs that are drawn from to support the USDA SBIR program. Nine of the ten sources of funds are funds that must be fully expended in the fiscal year of appropriation and are obligated for the SBIR program prior to expiration. The AFRI funds dedicated to SBIR are the only USDA funds carried over, when appropriate.

Funds that are available until expended provide USDA with the flexibility to make the best use of program funds. This flexibility has three primary advantages; (1) only the best proposals are funded; (2) the award size in a given year can be increased without reducing the number of awards made; and (3) the effective administration of the SBIR program, in accordance with 15 U.S.C. 638(mm).

With the option to carryover some of the SBIR program funds in a given year to the following year, USDA has the flexibility to only fund those proposals truly deserving of funding. Alternatively, in a given year there may be many outstanding proposals and funds carried over can be awarded. In some years the funds allocated for awards exceeds the minimum percentage of the extramural R&D budget dedicated to SBIR, while in other years, such as in FY 2012, the funds actually obligated in that year fall below the minimum percentage. Furthermore, USDA can increase award sizes without significantly reducing the number of awards when carryover funds are available.

For three fiscal years beginning after 2011, no more than 3 percent of SBIR program funds can be spent on expenses associated with administration, oversight, and processing costs of the SBIR program. These funds can also be used for commercialization and outreach initiatives. Given the unique funding structure of the SBIR program, to effectively spend the allowable percentage on administrative expenses, USDA relies on the availability of funding throughout the fiscal year. Without the ability to carryover funds, funds might not be available until Congress appropriates funding, sometime late in the fiscal year.

Mr. Frank Rusco
Page 3

The USDA SBIR program will continue to comply with all reporting requirements. Future USDA reports to SBA will more clearly indicate the fiscal year in which the funds were reserved and the fiscal year in which the funds were actually obligated (see sample below).

Thank you again for the opportunity to review and respond to the GAO draft report.

Sincerely,

Sonny Ramaswamy
Director

Attachment

USDA SBIR Funding Breakdown					
FDC	Amount	Obligated in FY12		Obligated in FY13	
		Awards	Commercialization	Awards	Commercialization
33610	$9,179,129.00	$9,029,129.00	$150,000.00		
39140	$811,416.00	$811,416.00			
51103	$128,910.00	$128,910.00			
39411	$108,654.00	$108,654.00			
39413	$3,959.00	$3,959.00			
39414	$15,030.00	$15,030.00			
33530*	$6,833,980.66	$4,724,991.65	$319,940.56	$1,789,048.45	
39412	$1,053,841.00	$1,053,841.00			
39539	$24,401.00	$24,401.00			
40000	$1,248,000.00	$1,248,000.00			
Totals	**$19,407,320.66**	**$17,618,272.21**		**$1,789,048.45**	
Total Allocation of FY12 Funds				**$19,407,320.66**	

* This is the FDC code for the no-year, AFRI funds.

Appendix VII: Comments from the Department of Defense

OFFICE OF THE UNDER SECRETARY OF DEFENSE
3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3000

ACQUISITION, TECHNOLOGY AND LOGISTICS

2 1 MAY 2014

Mr. Frank Rusco
Director
Natural Resources and Environment-Energy and Science
Government Accountability Office
Washington, DC 20548

Dear Mr. Rusco:

Thank you for the opportunity to review and comment on the GAO Draft Report, GAO-14-431, "SMALL BUSINESS RESEARCH PROGRAMS: More Guidance and Oversight Needed to Comply with Spending and Reporting Requirements," dated April 29, 2014 (GAO Code 361530).

The Department of Defense (DoD) would like to comment on assertions in the report that the Department has not been in compliance with spending requirements under section 9 of the Small Business Act, 15 U.S.C 638. Specifically, we believe that the conclusions drawn on pages 10-12 do not accurately reflect that DoD's methodology is reasonable and consistent with the law.

Although we concur with your finding on page 10 of the draft report that states DoD does not "expend" all SBIR and STTR funds appropriated to the Department in the same fiscal year that they are received, we continue to believe that we are in compliance with the law in that we obligate the minimum percentage of SBIR and STTR funds each year in accordance with the obligation authority conferred by Congress and longstanding DoD procedures.

Thank you for the opportunity to comment on the report.

Sincerely,

Christopher S. Rinaldi
Administrator, DoD SBIR and STTR Programs
DoD Office of Small Business Programs

Appendix VIII: GAO Contact and Staff Acknowledgments

GAO Contact

Frank Rusco, (202) 512-3841 or ruscof@gao.gov

Staff Acknowledgments

In addition to the individual named above, Hilary Benedict, Assistant Director; Antoinette Capaccio; Cindy Gilbert; Richard Johnson; Armetha Liles; Rebecca Makar; Cynthia Norris; and Daniel Semick made key contributions to this report.

GAO's Mission

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