



Testimony Before the Subcommittee on Contracting and the Workforce, Committee on Small Business, and the Subcommittee on Research and Technology, Committee on Science, Space and Technology, House of Representatives

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SMALL BUSINESS RESEARCH PROGRAMS

Status of Prior Recommendations

Statement of John Neumann, Director, Natural Resources
and Environment

ACCESSIBLE VERSION

GAO Highlights

Highlights of [GAO-17-594T](#), testimony before the Subcommittee on Contracting and the Workforce, Committee on Small Business, and the Subcommittee on Research and Technology, Committee on Science, Space and Technology, House of Representatives

Why GAO Did This Study

For about 35 years, federal agencies have made awards to small businesses for technology research and development through the SBIR program and, for the last 25 years, through the STTR program, totaling more than \$40 billion. Currently, 11 agencies participate in the SBIR program, and 5 of these agencies also participate in the STTR program. The SBIR/STTR Reauthorization Act of 2011 included provisions for GAO to review aspects of the programs.

This statement addresses GAO's key findings and recommendations related to the SBIR and STTR programs since 2012. This statement is based on GAO reports issued in response to the act's provisions from November 2012 through April 2017. Those reports examined SBA's and agencies' compliance with spending and other reporting requirements for the programs and their implementation of fraud, waste, and abuse prevention measures. For those reports, GAO compared documentation from SBA and participating agencies with the respective requirements. In April 2017, GAO updated the status of its prior recommendations.

What GAO Recommends

GAO has made 17 recommendations to SBA to improve oversight and implementation of the SBIR and STTR programs. SBA generally agreed with the recommendations. SBA has taken or described planned actions to address the recommendations, which GAO will continue to monitor.

View [GAO-17-594T](#). For more information, contact John Neumann at (202) 512-3841 or neumannj@gao.gov.

May 2017

SMALL BUSINESS RESEARCH PROGRAMS

Status of Prior Recommendations

What GAO Found

The Small Business Administration (SBA), which oversees the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs, and agencies participating in the programs have implemented about one-third of GAO's 20 prior recommendations regarding the programs. From September 2013 through April 2017, GAO made 17 recommendations to SBA and 3 to participating agencies to improve the oversight and implementation of spending requirements; reporting requirements; the administrative pilot program; and fraud, waste, and abuse prevention requirements. SBA has implemented 5 recommendations, and participating agencies have implemented 1 (see figure), although GAO made 4 of these recommendations to SBA and 2 to participating agencies in April 2017.

Number and Percentage of Prior GAO Recommendations Implemented as of April 2017

| Agency | Number of recommendations | Number of recommendations implemented | Percentage of recommendations implemented |
|---|---------------------------|---------------------------------------|---|
| Small Business Administration | 17 | 5 | 29 |
| Department of Health and Human Services | 2 | 1 | 50 |
| Department of Defense | 1 | 0 | 0 |
| Total | 20 | 6 | 30 |

Source: GAO. | GAO-17-594T

SBA and participating agencies have taken some actions to address GAO's recommendations. For example, in June 2014, GAO recommended that SBA clarify how agencies are to submit data on allowable spending. In response, SBA revised its annual report template, requesting that agencies identify obligations for the programs outside of awards. This change has improved the accuracy of the data that agencies report to SBA. However, SBA and the participating agencies have not fully implemented 14 recommendations that, if implemented, could improve the oversight and implementation of the programs. For example, in each of its four reports on agencies' compliance with spending and other reporting requirements, GAO found that SBA had not submitted required annual reports to Congress on the programs. SBA issued its most recent required report on the programs for fiscal year 2013 in March 2016. In a September 2013 report, GAO concluded that without more rigorous oversight by SBA and more timely and detailed reporting, it would be difficult for SBA to ensure that intended benefits of the programs were being attained and that Congress was receiving critical information to oversee these programs. GAO recommended that SBA provide Congress with a timely annual report, as required by the act. SBA agreed and stated that it planned to implement the recommendation. However, SBA has not yet done so and, as of April 2017, SBA did not have an estimated date for submitting its reports for fiscal years 2014 through 2016. GAO continues to believe that it is important for SBA to provide a timely annual report to Congress to further improve oversight of the programs.

Chairman Knight, Chairwoman Comstock, Ranking Members Murphy and Lipinski, and Members of the Subcommittees,

Thank you for the opportunity to discuss our work on the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. For about 35 years, federal agencies have made awards to small businesses for technology research or research and development (R&D) through the SBIR program and, for the last 25 years, through the STTR program. Federal agencies have awarded an average of about \$2 billion a year through these programs and a total of more than \$40 billion for 150,000 contracts and grants since their inception in 1982 and 1992, respectively. Currently, 11 agencies participate in the SBIR program, and 5 of these agencies also participate in the STTR program, as shown in table 1.

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

| Agency | Program | |
|---|---------|------|
| | SBIR | STTR |
| Department of Agriculture | X | |
| Department of Commerce | X | |
| Department of Defense | X | X |
| Department of Education | X | |
| Department of Energy | X | X |
| Department of Health and Human Services | X | X |
| Department of Homeland Security | X | |
| Department of Transportation | X | |
| Environmental Protection Agency | X | |
| National Aeronautics and Space Administration | X | X |
| National Science Foundation | X | X |

Source: Small Business Administration. | GAO-17-594T

Each participating agency is to manage its SBIR and STTR programs in accordance with program laws and regulations and the policy directives issued by the Small Business Administration (SBA), which oversees the

two programs.¹ Federal agencies with obligations of \$100 million or more for extramural R&D are required to establish and administer an SBIR program, and federal agencies with obligations of \$1 billion or more for extramural R&D are also required to establish and administer an STTR program.² The Small Business Act, which authorizes the programs, establishes the amount of an agency's funding that must be spent on the SBIR and STTR programs each year.³ In fiscal year 2017, agencies participating in the SBIR program are required to spend at least 3.2 percent of their extramural R&D obligations on the program, and agencies participating in the STTR program are required to spend at least 0.45 percent of their extramural R&D obligations on the program.

The SBIR/STTR Reauthorization Act of 2011 (reauthorization act) included provisions for us to review aspects of the SBIR and STTR programs.⁴ In response to those provisions, we have issued four reports on SBA and agencies' compliance with spending and other reporting

¹SBA'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.

²Agencies' 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.

³The Small Business Act requires a minimum percentage of an agency's extramural R&D "budget" to be spent on the programs annually, but it defines the extramural R&D budget in terms of obligations. More specifically, the act defines an agency's extramural R&D budget as the sum of an agency's total R&D obligations minus amounts obligated for research conducted by employees of the agency in or through government-owned and government-operated facilities. In 2014, SBA changed the terminology it uses from "extramural R&D budget" to "extramural R&D obligations" to clarify how agencies are required to calculate their spending requirements for the programs. In this statement, we generally use the term extramural R&D obligations to be consistent with SBA's terminology. We use the term "spending" to refer to agencies' obligations for extramural R&D efforts, including those for the SBIR and STTR programs, and we refer to the amounts resulting from applying the mandated percentages to extramural R&D obligations as "spending requirements."

⁴SBIR/STTR Reauthorization Act of 2011, Pub. L. No. 112-81, div. E, tit. LI, §§ 5001-5168, 125 Stat. 1298, 1822-62 (codified at 15 U.S.C. §§ 638-638b (2017)).

requirements for the programs,⁵ and two reports on SBA and agencies' implementation of fraud, waste, and abuse prevention measures.⁶

This statement describes our key findings and recommendations related to the SBIR and STTR programs since 2012 and actions taken to address those recommendations. This statement is based on our prior reports on the SBIR and STTR programs issued from November 2012 through April 2017. For those reports, we reviewed documentation from SBA and the participating agencies and interviewed officials from SBA and the participating agencies. We compared documentation from SBA and the participating agencies with their respective requirements. Our prior reports include detailed information on the methods used to conduct our prior work. In April 2017, we consulted with agencies on the current status of open recommendations and updated our prior recommendations.

We conducted the work on which this statement is based 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 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 purposes: (1) to use small businesses to meet federal R&D needs, (2) to stimulate technological innovation, (3) to increase commercialization of innovations

⁵GAO, *Small Business Research Programs: Actions Needed to Improve Compliance with Spending and Reporting Requirements*, [GAO-13-421](#) (Washington, D.C.: Sept. 9, 2013); *Small Business Research Programs: More Guidance and Oversight Needed to Comply with Spending and Reporting Requirements*, [GAO-14-431](#) (Washington, D.C.: June 6, 2014); *Small Business Research Programs: Challenges Remain in Meeting Spending and Reporting Requirements*, [GAO-15-358](#) (Washington, D.C.: Apr. 15, 2015); and *Small Business Research Programs: Agencies Have Improved Compliance with Spending and Reporting Requirements, but Challenges Remain*, [GAO-16-492](#) (Washington, D.C.: May 26, 2016).

⁶GAO, *Small Business Research Programs: Agencies Are Implementing New Fraud, Waste, and Abuse Requirements*, [GAO-13-70R](#) (Washington, D.C.: Nov. 15, 2012) and *Small Business Research Programs: Additional Actions Needed to Implement Fraud, Waste, and Abuse Prevention Requirements*, [GAO-17-337](#) (Washington, D.C.: Apr. 25, 2017).

derived from federal R&D efforts, and (4) to encourage participation in technological innovation by small businesses owned by disadvantaged individuals and women. 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. The SBIR and STTR programs are similar in that participating agencies identify topics for R&D projects and support small businesses, but the STTR program requires the small business to partner with a research institution—such as a nonprofit college or university or federally funded R&D center.⁷ The programs are currently authorized through fiscal year 2022.⁸

The SBIR and STTR policy directives require participating agencies to submit data to SBA each year on the amount of their extramural R&D obligations 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 must, within 4 months of the enactment of their annual appropriations, report to SBA on their methodologies for calculating their extramural R&D obligations. Furthermore, SBA must annually report to Congress on the participating agencies' SBIR and STTR programs. Additionally, the reauthorization act directed SBA to allow agencies to participate in a pilot program, known as the administrative pilot program, which permitted the funding of administrative and certain other costs in fiscal years 2013 through 2015.⁹ Under this administrative pilot program, agencies are allowed to use not more than 3 percent of the funding allocated to the SBIR program for new activities, including program administration; outreach; commercialization; standardization and simplification of program procedures; prevention of waste, fraud, and abuse; and congressional reporting. The SBIR and STTR policy directives specifically note that funding under the pilot program may not replace current agency administrative funding for SBIR or STTR activities.

⁷Federally funded R&D centers are government-funded entities operated by nongovernmental organizations to meet long-term research or development needs that cannot be met as effectively by existing governmental or contractor resources. These entities typically assist government agencies with scientific research and analysis, systems development, and system acquisition.

⁸National Defense Authorization Act for Fiscal Year 2017, Pub. L. No. 114-328, § 1834 (2016).

⁹SBIR/STTR Reauthorization Act of 2011 § 5141 (codified as amended at 15 U.S.C. § 638(mm) (2017)).

Instead, the administrative pilot program is intended to supplement existing administrative efforts. In November 2015, the National Defense Authorization Act for Fiscal Year 2016 extended the pilot program through September 30, 2017.¹⁰ In December 2016, the National Defense Authorization Act for Fiscal Year 2017 extended the SBIR and STTR programs through fiscal year 2022, but did not extend the pilot program.¹¹

The reauthorization act required SBA to add fraud, waste, and abuse prevention requirements to the policy directives for agencies to implement.¹² In 2012, SBA issued revised policy directives for the SBIR and STTR programs that included new requirements designed to help agencies prevent potential fraud, waste, and abuse in the programs. In addition to the requirements for the participating agencies, the reauthorization act included requirements for those agencies' Offices of the Inspectors General (OIG).¹³

SBA and Participating Agencies Have Implemented About One-Third of Our Prior Recommendations

SBA has implemented 5 of the 17 recommendations we have made on the SBIR and STTR programs and the participating agencies to which we have made recommendations—the Departments of Health and Human Services (HHS) and Defense (DOD)—have implemented 1 of the 3 recommendations we made. From September 2013 through April 2017, we made recommendations to SBA and participating agencies to improve oversight and implementation of the programs in four areas: (1) spending requirements; (2) other reporting requirements; (3) the administrative pilot program; and (4) fraud, waste, and abuse prevention requirements. The complete list of recommendations and the status of agencies' implementation of the recommendations is included in appendix I.

¹⁰National Defense Authorization Act for Fiscal Year 2016, Pub. L. No. 114-92, § 873(e), 129 Stat. 726, 939 (2015) (codified at 15 U.S.C. § 638(mm)(1) (2017)).

¹¹National Defense Authorization Act for Fiscal Year 2017, Pub. L. No. 114-328, § 1834 (2016).

¹²SBIR/STTR Reauthorization Act of 2011 § 5143(a)(1).

¹³SBIR/STTR Reauthorization Act of 2011 § 5143(a)(5).

HHS Implemented Recommendation on Spending Requirements, and SBA Implemented Half of Recommendations Related to Those Requirements

From September 2013 through April 2017, we made six recommendations to SBA and one to HHS to improve oversight and implementation of the SBIR and STTR spending requirements. SBA has fully implemented three of these recommendations and HHS has implemented its recommendation in this area (see app. I). Some actions that SBA and HHS have taken to address our recommendations include the following:

- In certain circumstances, amounts that the agencies spend for items other than awards count as part of the agencies' spending for the programs. In our June 2014 report, we found that SBA did not request that agencies submit data on such spending and recommended that the agency clarify how to submit such data.¹⁴ In response to our recommendation, SBA revised its annual report templates for data reported since fiscal year 2013 to identify obligations for the programs outside of awards, such as funds spent on discretionary technical assistance to small businesses. This change has improved the accuracy of participating agencies' obligations data that they report to SBA and that SBA, in turn, reports to Congress.
- In our September 2013 report, we found that SBA did not request that agencies include information in their annual reports that would enable SBA to conduct better oversight, including information on (1) whether agencies met the mandated spending requirements, (2) the reasons for any noncompliance with these requirements, and (3) the agencies' plans for attaining compliance in future years.¹⁵ We recommended that SBA direct participating agencies to include this information in their annual reports to SBA. In response, SBA updated the annual report template to request this information starting in fiscal year 2015, which should help SBA more fully oversee the programs and provide more complete information to Congress.
- In our June 2014 report, we found that HHS used different extramural R&D budget data to calculate its SBIR and STTR spending

¹⁴[GAO-14-431](#).

¹⁵[GAO-13-421](#).

requirements.¹⁶ We recommended that HHS include all of its extramural R&D budget in the calculation of STTR spending requirements and in the data submitted to SBA to help ensure that the agency spends the required amount for the STTR program. According to program documents and agency officials, HHS included all of its extramural R&D in its budget data for the STTR program beginning with its annual report for fiscal year 2014, which was submitted in March 2015.

SBA has not yet fully implemented three of our recommendations related to the spending requirements. For example, in our May 2016 report, we found that USDA's extramural R&D obligations exceeded the threshold for participating in the STTR program, but USDA did not start an STTR program.¹⁷ For that report, USDA officials told us that they did not establish an STTR program because they did not expect their extramural R&D obligations to exceed \$1 billion in fiscal year 2014 and that they believed the agency's obligations were an anomaly. Further, because the spending requirement is based on actual obligations, which cannot be known until after the end of the fiscal year, USDA was unaware of its actual obligations until it was too late to retroactively begin an STTR program. Although the Small Business Act is clear about the dollar threshold for starting an SBIR or STTR program, neither the law nor SBA's guidance specifies when an agency should establish a program—for example, at the beginning of the year, partway through the year, or at the end of the year. We recommended that SBA review its guidance regarding when an agency is required to start up an SBIR or STTR program, and if necessary, update the guidance to provide greater clarity to agencies. SBA agreed with our recommendation and, as of April 2017, SBA officials said they were working to develop language to update SBA's policy directives to provide guidance on when an agency must start an SBIR or STTR program. We continue to believe that fully implementing this recommendation is important because such information may help ensure that agencies will establish programs when required and ensure that the required amount of money is available for small businesses participating in the programs.

¹⁶[GAO-14-431](#).

¹⁷[GAO-16-492](#).

SBA Implemented One of Five Recommendations to Improve Compliance with Other Reporting Requirements

The Small Business Act requires SBA to report annually to Congress on the programs and requires participating agencies to report to SBA within 4 months of the enactment of appropriations on their methodologies for determining their extramural R&D budgets. We have made five recommendations to SBA to improve compliance with these reporting requirements. SBA has fully implemented one recommendation (see app. I), but four remain open. For example:

- In each of our four reports on agencies' compliance with spending and other reporting requirements, we found that SBA had not submitted timely reports to Congress on the SBIR and STTR programs. The Small Business Act requires SBA to report to certain congressional committees on the SBIR and STTR programs not less than annually. SBA issued its most recent required report to Congress on the SBIR and STTR programs for fiscal year 2013 in March 2016. In our September 2013 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 would be difficult for SBA to ensure that intended benefits of the SBIR and STTR programs were being attained and that Congress was receiving critical information to oversee these programs.¹⁸ In that 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. SBA agreed and stated at the time that it planned to implement the recommendation. SBA officials told us that they have taken some steps to help them develop the required reports to Congress, but have not submitted SBA's reports for fiscal years 2014, 2015, or 2016. We continue to believe that it is important for SBA to provide a timely annual report to Congress to further improve oversight of the programs.
- In our September 2013 report, we found that agencies submitted different levels of detail on their methodologies in their required reports to SBA.¹⁹ In that report, we recommended that SBA provide agencies with additional guidance on the format to use for

¹⁸[GAO-13-421](#).

¹⁹[GAO-13-421](#).

methodology reports. Further, we found in our April 2015 report that, as a result of the varying detail that agencies provide in their methodology reports, it was difficult for SBA to complete its required analysis of the methodology reports.²⁰ We recommended that SBA assess and update, if needed, the methodology reporting requirement to ensure it generates adequate information. In response to that recommendation, SBA proposed expanded guidance to agencies. However, the proposed guidance has not yet been finalized. According to SBA officials, SBA withdrew the draft policy directive from Office of Management and Budget consideration in January 2017 and it is under further internal consideration in light of a recent executive order. Without finalizing the proposed guidance, participating agencies are likely to continue to provide SBA with broad, incomplete, or inconsistent information on their methodologies for calculating their extramural R&D and SBA cannot ensure that it is able to provide Congress with an accurate analysis of how agencies calculate their extramural R&D. Additionally, in our September 2013 report—and others—we found that SBA had not consistently provided feedback to agencies on the content of their methodology reports, and recommended that SBA provide timely annual feedback to agencies on whether their methods for calculating their extramural R&D budgets complies with program requirements. We concluded that, without such review and feedback, agencies may be calculating their extramural R&D incorrectly, which could lead to their spending less than the required amounts on the programs. We continue to believe that updating its guidance on information to include in the methodology reports and providing feedback to agencies on their methodologies could help SBA ensure that agencies are spending the required amounts on the SBIR and STTR programs.

SBA Has Implemented One of Two Recommendations Relating to the Administrative Pilot Program

Since fiscal year 2013, agencies have been allowed to spend some of their SBIR funding for certain administrative costs related to the programs. We have made two recommendations to SBA to improve its oversight of the administrative pilot programs. SBA has implemented one of the two recommendations.

²⁰[GAO-15-358](#).

In our April 2015 report, we found that for fiscal year 2013, SBA had requested that agencies submit information on the total amounts spent on the administrative pilot program, but it did not request agencies to submit information on how they used the funds.²¹ Fiscal year 2013 was the first year of the pilot program, and, as we found in that report, SBA officials were still determining the information they needed to report to Congress. We recommended that SBA require participating agencies to provide data on the use of the funds, rather than a total cost for all of the activities under the pilot. In response, SBA updated the annual report template used to collect program data from the agencies for fiscal year 2014, which was submitted in the spring of 2015, to collect this information. This improved the information available to SBA on the amounts spent on activities through the administrative pilot program.

In our May 2016 report, we found that participation in the administrative pilot program had increased in fiscal year 2014 compared with prior years, but agency officials identified potential constraints that limited their participation, including the temporary nature of the program and the requirement to expend funds only on new activities.²² SBA is required to collect data and report on the use of funds to achieve the objectives of the administrative pilot program, but had not yet submitted a report.²³ We recommended that SBA complete its required evaluation of the administrative pilot program, which could include an evaluation of the constraints that have hindered agencies' participation in the administrative pilot program and steps to address these constraints. SBA has not submitted a report to Congress on the administrative pilot program for fiscal year 2014. We continue to believe that having SBA include an evaluation of potential constraints to participating in the administrative pilot program, whether as part of the annual report or in a separate report, could be useful if Congress decides to continue the program in the future. We concluded that, without such information, SBA and Congress will not have the information they need to address the constraints and help ensure agencies are implementing the administrative pilot program to the fullest extent if Congress chooses to extend the pilot program beyond fiscal year 2017.

²¹[GAO-15-358](#).

²²[GAO-16-492](#).

²³15 U.S.C. § 638(mm)(6) (2017).

SBA and DOD Plan to Implement April 2017 Recommendations on Fraud, Waste, and Abuse Prevention Requirements

In our April 2017 report on the SBIR and STTR programs, we reviewed the implementation of fraud, waste, and abuse prevention measures by SBA and the participating agencies and their OIGs. SBA amended the SBIR and STTR policy directives in 2012, as required by the reauthorization act, to include 10 minimum requirements to help agencies prevent potential fraud, waste, and abuse in the programs. In that report, we found that the extent to which the participating agencies have fully implemented each of the 10 minimum requirements varies.²⁴ We made four recommendations to SBA and recommendations to HHS and DOD to improve implementation of the requirements (see app. I). HHS disagreed with our recommendation, but we continue to believe the recommendation is valid and should be implemented.²⁵ SBA and DOD plan to implement all of their recommendations. For example:

- We found that SBA had taken few actions to oversee agencies' implementation of the policy directives' minimum requirements to address fraud, waste, and abuse in the SBIR and STTR programs. SBA officials said they checked on the implementation of one of the requirements but did not know whether the participating agencies were implementing the other requirements because they had not confirmed this information. We concluded that, without confirming that each participating agency is implementing the fraud, waste, and abuse prevention requirements in the policy directives, SBA did not have reasonable assurance that each agency has a system in place to reduce its' vulnerability to fraud, waste, and abuse. SBA agreed with the recommendation and stated that it will request that each participating agency confirm its implementation of the minimum fraud, waste, and abuse prevention requirements.
- Although SBA updated the SBIR and STTR policy directives in 2012 to include the fraud, waste, and abuse prevention requirements, SBA officials said they have not taken action since 2012 to review them to determine whether they are effective or whether any revisions are needed. We identified requirements that some agency officials said

²⁴[GAO-17-337](#).

²⁵See appendix I and [GAO-17-337](#) for additional information.

were not clear or may be unnecessary, and we recommended that SBA review all of the SBIR and STTR fraud, waste, and abuse prevention requirements and clarify any that are unclear. SBA stated it will contact all agencies to inquire if additional clarity is needed regarding any of the fraud, waste, and abuse requirements, and will provide additional guidance, if necessary.

- We found that SBA had not evaluated the outcomes of the agencies' implementation of the fraud, waste, and abuse prevention requirements and therefore did not have reasonable assurance that the requirements are necessary, appropriate, and meet the intended purpose of preventing fraud, waste, and abuse in the SBIR and STTR programs. We recommended that SBA ensure that the requirements are appropriate and meeting their intended purposes. In response to that recommendation, SBA stated that it would survey the participating agencies regarding whether the requirements are necessary and meeting their intended purposes; are placing undue burdens on the agencies; or need to be revised, updated, or eliminated.

We look forward to reviewing the agencies' progress in implementing these important recommendations.

Chairman Knight, Chairwoman Comstock, Ranking Members Murphy and Lipinski, and Members of the Subcommittees, this completes my prepared statement. I would be pleased to respond to any questions that you have.

GAO Contact and Staff Acknowledgments

If you or your staff have any questions about this testimony, please contact John Neumann, Director, Natural Resources and Environment at (202) 512-3841 or neumannj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Individuals making key contributions to this statement

included Hilary Benedict (Assistant Director), Antoinette Capaccio, Rebecca Makar, and Kiki Theodoropoulos.

Appendix I: GAO's Prior Recommendations on Small Business Research Programs

Table 2 lists our prior recommendations to the Small Business Administration (SBA) and the agencies participating in the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs, and the status of those recommendations, in four areas: (1) spending requirements, (2) other reporting requirements, (3) the administrative pilot program, and (4) fraud, waste, and abuse prevention requirements.

Table 2: GAO Reports Containing Recommendations on the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs by Category and Status of Recommendations

| Category and recommendation | Report number | Status |
|--|----------------------------|--|
| Spending requirements | | |
| Recommendation to: Small Business Administration (SBA) | GAO-13-421 | Open |
| To ensure that participating agencies and SBA comply with spending and reporting requirements for the SBIR and STTR programs, the SBA Administrator should provide additional guidance on how agencies should calculate spending requirements when agency appropriations are received late in the fiscal year and the format agencies are to include in their methodology reports. | | According to SBA officials, the timing of appropriations does not affect how agencies should calculate their spending requirements. We believe that the existing guidance on calculating spending requirements addresses the first part of this recommendation. In response to our recommendation, SBA updated its annual report template, which asked agencies to provide certain information for their methodology reports as part of their annual reports. The revised template was used for the fiscal year 2013 data that agencies reported to SBA in June 2014 and similar information was requested for fiscal year 2014. Further, SBA's proposed program policy directive, published in the Federal Register in April 2016, included additional information that agencies are to include in their methodology reports. However, according to SBA officials, in January 2017, the policy directive was withdrawn from the Office of Management and Budget and is under further internal consideration in light of a recent executive order. As of April 2017, SBA has not established a time frame for publication of the final policy directive. |

| Category and recommendation | Report number | Status |
|--|---------------|--------------------|
| <p>Recommendation to: SBA</p> <p>To ensure that participating agencies and SBA comply with spending and reporting requirements for the SBIR and STTR programs, the SBA Administrator should direct participating agencies to include in their annual reports the calculation of the final extramural research or research and development (R&D) budget used as the basis for their SBIR and STTR spending requirements and, if they did not meet the spending requirements, the reasons why not and how they plan to meet the spending requirements in the future.</p> | GAO-13-421 | Closed-implemented |
| <p>Recommendation to: SBA</p> <p>To improve compliance with the Small Business Act and enhance SBA's ability to provide oversight of the programs, the SBA Administrator should revise the language in the SBIR and STTR policy directives to accurately summarize the statutory provisions that describe the program spending requirements.</p> | GAO-14-431 | Open |
| <p>Recommendation to: SBA</p> <p>To improve compliance with the Small Business Act and enhance SBA's ability to provide oversight of the programs, the SBA Administrator should 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.</p> | GAO-14-431 | Closed-implemented |
| <p>Recommendation to: Department of Health and Human Services (HHS)</p> <p>To help ensure that the agency continues to spend the required amount for the STTR program, the Secretary of Health and Human Services should include all of the agency's extramural R&D budget in the calculation of STTR spending requirements and in the data submitted to SBA.</p> | GAO-14-431 | Closed-implemented |

| Category and recommendation | Report number | Status |
|--|-----------------------------------|--|
| <p>Recommendation to: SBA</p> <p>To ensure full compliance with SBIR and STTR spending and reporting requirements, the SBA Administrator should notify Congress in SBA's annual report if it cannot determine agency compliance with program spending requirements when agencies that participate in the SBIR and/or STTR programs do not report extramural R&D obligations data, or develop a proposal to Congress that would change the requirement.</p> | <p>GAO-15-358</p> | <p>Closed-implemented</p> <p>In SBA's annual report to Congress on the SBIR and STTR programs for fiscal year 2013, which was submitted in April 2016, SBA clearly reported whether agencies reported extramural R&D obligations data. The report states that SBA could not accurately determine whether agencies that reported budget figures, rather than obligations, complied with program spending requirements for fiscal year 2013. Further, the report states that SBA will continue to work with agencies to continue to improve reporting.</p> |
| <p>Recommendation to: SBA</p> <p>To ensure full compliance with SBIR and STTR spending and reporting requirements and improve participation in the administrative pilot program, the SBA Administrator should review SBA guidance regarding when an agency is required to start up an SBIR or STTR program, and if necessary, update the guidance to provide greater clarity to agencies with R&D obligations greater than the thresholds for participating.</p> | <p>GAO-16-492</p> | <p>Open</p> <p>According to SBA officials, as of April 2017, SBA is working to develop language to update its policy directives to provide guidance on when an agency must start an SBIR or STTR program.</p> |
| Other reporting requirements | | |
| <p>Recommendation to: SBA</p> <p>To ensure that participating agencies and SBA comply with spending and reporting requirements for the SBIR and STTR programs, the SBA Administrator should provide timely annual feedback to each agency following submission of its methodology report on whether its method for calculating the extramural R&D budget used as the basis for the SBIR and STTR spending requirements complies with program requirements including an itemization of and an explanation for all exclusions from the basis for the calculations.</p> | <p>GAO-13-421</p> | <p>Open</p> <p>In April 2017, SBA officials said that SBA provided feedback to all agencies regarding their agency methodology reports. When SBA provides documentation, we will review the information and determine whether it meets the intent of the recommendation.</p> |

| Category and recommendation | Report number | Status |
|--|-----------------------------------|---|
| <p>Recommendation to: SBA</p> <p>To ensure that participating agencies and SBA comply with spending and reporting requirements for the SBIR and STTR programs, the SBA Administrator should 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, providing a clear basis for SBA's conclusions about whether these calculations meet program requirements.</p> | <p>GAO-13-421</p> | <p>Open</p> <p>According to SBA officials, as of April 2017, SBA had completed a draft of its report to Congress for fiscal year 2014 and expected to send it to the participating agencies and the Office of Management and Budget for review after SBA completed its internal review. The officials said that the report for fiscal year 2015 is being drafted, and SBA is in the process of reviewing the participating agencies' data for fiscal year 2016, which were due to SBA in March 2017. As of April 2017, SBA did not have an anticipated issuance date for the reports to Congress for fiscal years 2014, 2015, or 2016.</p> |
| <p>Recommendation to: SBA</p> <p>To improve compliance with the Small Business Act and enhance SBA's ability to provide oversight of the programs, the SBA Administrator should 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.</p> | <p>GAO-14-431</p> | <p>Closed-implemented</p> <p>To improve agency compliance with the Small Business Act and enhance SBA's oversight, in February 2016, SBA's Director of Innovation and Technology sent an email reminding the SBIR and STTR program managers to submit their methodology reports within 4 months of receiving appropriations, in accordance with the program policy directives and statute.</p> |
| <p>Recommendation to: SBA</p> <p>To ensure full compliance with SBIR and STTR spending and reporting requirements, the SBA Administrator should assess the methodology reporting requirement to determine whether it generates adequate information for SBA to analyze the accuracy of agencies' calculations of their extramural R&D. If SBA finds that the information is inadequate, SBA should update its guidance to require adequate information.</p> | <p>GAO-15-358</p> | <p>Open</p> <p>In April 2016, SBA proposed expanded guidance to agencies regarding their annual methodology reports in its update to the program policy directives. The proposed guidance required agencies to include an explanation of the calculation of the total extramural R&D, an itemization of excluded programs, and an explanation of why the program was excluded, as well as a review of the agency's compliance with the funding requirement for the prior fiscal year and a funding plan for the current fiscal year for how the agency plans to meet or exceed the year's expected minimum obligations requirement. However, according to SBA officials, in January 2017, the policy directive was withdrawn from the Office of Management and Budget and is under further internal consideration in light of a recent executive order. As of April 2017, SBA had not established a time frame for publication of the final policy directive.</p> |

| Category and recommendation | Report number | Status |
|--|----------------------------|---|
| Recommendation to: SBA | GAO-16-492 | Open |
| <p>To ensure full compliance with SBIR and STTR spending and reporting requirements and improve participation in the administrative pilot program, the SBA Administrator should restore guidance requesting that agencies provide dollar amounts for exclusions in agency methodology reports to SBA.</p> | | <p>According to SBA officials, SBA updated its annual report template to collect the dollar amounts associated with programs exempted and excluded from the calculation of extramural R&D. We will review the updated template when SBA provides it to us.</p> |
| Administrative pilot program | | |
| Recommendation to: SBA | GAO-15-358 | Closed-implemented |
| <p>To ensure full compliance with SBIR and STTR spending and reporting requirements, the SBA Administrator should provide greater transparency for the administrative pilot program by requiring participating agencies to provide data on the use of the funds, rather than a total cost for all of the activities under the pilot.</p> | | <p>SBA updated the annual report template used to collect program data from the agencies for fiscal year 2014, which was submitted in the spring of 2015, to require agencies to provide detail on how the administrative pilot program funds were used and how the activity relates to the agency's funding plan. Agencies that participated in the administrative pilot provided the requested information to SBA.</p> |
| Recommendation to: SBA | GAO-16-492 | Open |
| <p>To ensure full compliance with SBIR and STTR spending and reporting requirements and improve participation in the administrative pilot program, the SBA Administrator should complete the required reporting on the administrative pilot program for fiscal year 2014, which could include an evaluation of the potential constraints that may hinder agencies' participation and any steps taken to address these constraints.</p> | | <p>As of April 2017, SBA officials said that SBA is in the process of completing its follow-up with agencies to document their utilization of the administrative pilot program. Specifically, officials said they requested that agencies that planned to participate in the pilot program complete a template with information on the pilot program. Once SBA receives that information, officials said they will draft a report. As of April 2017, a formal date for completing and submitting the report had not been established.</p> |
| Fraud, waste, and abuse prevention | | |
| Recommendation to: SBA | GAO-17-337 | Open |
| <p>To help improve agencies' implementation of the fraud, waste, and abuse prevention requirements in the policy directives, we recommend that the Administrator of SBA confirm that each SBIR and STTR agency is implementing the minimum fraud, waste, and abuse prevention requirements in the policy directives, by, for example, requesting documentation from agencies.</p> | | <p>SBA agreed with our recommendation. In comments on our draft report, SBA officials said that SBA will request that each participating agency confirm its implementation of the minimum fraud, waste, and abuse prevention requirements. We will review SBA's actions when they are complete.</p> |

| Category and recommendation | Report number | Status |
|---|---|---|
| <p data-bbox="99 489 375 516">Recommendation to: SBA</p> <p data-bbox="99 562 542 930">To help improve agencies' implementation of the fraud, waste, and abuse prevention requirements in the policy directives, we recommend that the Administrator of SBA request input from the participating agencies regarding the clarity of the requirements; review all of the SBIR and STTR minimum fraud, waste, and abuse prevention requirements, including the agency requirement to post information about successful SBIR or STTR fraud prosecutions; determine whether any additional guidance is needed; and revise the policy directives accordingly.</p> | <p data-bbox="581 489 716 516">GAO-17-337</p> | <p data-bbox="760 489 818 516">Open</p> <p data-bbox="760 562 1503 695">SBA agreed with our recommendation. In comments on our draft report, SBA officials said that SBA will contact all agencies to inquire if additional clarity is needed regarding any of the fraud, waste, and abuse prevention requirements and, if necessary, provide additional guidance. We will review SBA's actions when they are complete.</p> |
| <p data-bbox="99 942 375 970">Recommendation to: SBA</p> <p data-bbox="99 1016 558 1329">To help improve agencies' implementation of the fraud, waste, and abuse prevention requirements in the policy directives, we recommend that the Administrator of SBA revise the fraud, waste, and abuse provisions in the policy directives to reflect the definition of essentially equivalent work used elsewhere in the policy directives and require participating agencies to check for essentially equivalent work that they fund as well as such work funded by other agencies.</p> | <p data-bbox="581 942 716 970">GAO-17-337</p> | <p data-bbox="760 942 818 970">Open</p> <p data-bbox="760 1016 1484 1171">SBA agreed with our recommendation. In comments on our draft report, SBA officials said that SBA will take steps to revise the SBIR and STTR policy directives to reflect the definition of essentially equivalent work as noted in section 3 of the policy directives and will work with all parties to determine how to best address the issue of duplication. We will review SBA's actions when they are complete.</p> |
| <p data-bbox="99 1341 375 1369">Recommendation to: SBA</p> <p data-bbox="99 1415 545 1673">To help improve agencies' implementation of the fraud, waste, and abuse prevention requirements in the policy directives, we recommend that the Administrator of SBA evaluate SBIR and STTR agencies' fraud, waste, and abuse outcomes to ensure the fraud, waste, and abuse prevention requirements are appropriate and meet their intended purpose for the SBIR and STTR programs.</p> | <p data-bbox="581 1341 716 1369">GAO-17-337</p> | <p data-bbox="760 1341 818 1369">Open</p> <p data-bbox="760 1415 1516 1570">SBA agreed with our recommendation. In comments on our draft report, SBA officials said that SBA will survey the participating agencies regarding whether the requirements are necessary and meeting their intended purposes; are placing undue burdens on the agencies; or need to be revised, updated, or eliminated. We will review SBA's actions when they are complete.</p> |

| Category and recommendation | Report number | Status |
|--|--|--------|
| Recommendation to: HHS | GAO-17-337 | Open |
| <p>To help improve the implementation of the fraud, waste, and abuse prevention requirements, we recommend that the Secretary of HHS direct the HHS SBIR and STTR program offices to collect copies of the self-certification forms from its SBIR and STTR awardees.</p> | <p>HHS disagreed with our recommendation and raised three issues explaining why it did not concur with our recommendation. First, HHS stated that it has implemented the requirements in the policy directives for life cycle certifications. Second, HHS stated that the agency cannot accurately determine when certifications are due to collect them because its financial data is typically 45 days in arrears. Third, HHS stated that grant fraud cases, including those for the SBIR or STTR programs, have been successfully prosecuted without grantees proactively submitting life cycle certifications. We continue to believe that taking steps to collect the certifications from SBIR and STTR awardees would bring HHS into full compliance with this requirement, and would provide HHS with better assurance that the awardees understand and agree to the terms of the contract. We therefore continue to believe that it is important for HHS to collect the signed life cycle certification forms from small businesses, and we retained the recommendation.</p> | |

Recommendation to: Department of
Defense (DOD)

[GAO-17-337](#)

Open

To help ensure that DOD is implementing the fraud, waste, and abuse prevention requirements to the OIGs, we recommend that the Inspectors General of the Army, Navy, and Air Force implement the requirements themselves or delegate the implementation of the requirements to the investigative services.

DOD agreed with our recommendation. We will review DOD's actions when they are complete.

Source: GAO. | GAO-17-594Ta

Appendix II: Accessible Data

Data Table for Highlights Figure 1: Number and Percentage of Prior GAO Recommendations Implemented as of April 2017

| Agency | Number of recommendations | Number of recommendations implemented | Percentage of recommendations implemented |
|---|---------------------------|---------------------------------------|---|
| Small Business Administration | 17 | 5 | 29 |
| Department of Health and Human Services | 2 | 1 | 50 |
| Department of Defense | 1 | 0 | 0 |
| Total | 20 | 6 | 30 |

Related GAO Products

Small Business Research Programs: Additional Actions Needed to Implement Fraud, Waste, and Abuse Prevention Requirements.

[GAO-17-337](#). Washington, D.C.: April 25, 2017.

Small Business Research Programs: Agencies Have Improved Compliance with Spending and Reporting Requirements, but Challenges Remain. [GAO-16-492](#). Washington, D.C.: May 26, 2016.

Small Business Research Programs: Challenges Remain in Meeting Spending and Reporting Requirements. [GAO-15-358](#). Washington, D.C.: April 15, 2015.

Small Business Innovation Research: Change in Program Eligibility Has Had Little Impact. [GAO-15-68](#). Washington, D.C.: November 20, 2014.

Small Business Research Programs: More Guidance and Oversight Needed to Comply with Spending and Reporting Requirements. [GAO-14-431](#). Washington, D.C.: June 6, 2014.

Small Business Research Programs: Agencies Did Not Consistently Comply with Spending and Reporting Requirements. [GAO-14-567T](#). Washington, D.C.: April 24, 2014.

Small Business Research Programs: Actions Needed to Improve Compliance with Spending and Reporting Requirements. [GAO-13-421](#). Washington, D.C.: September 9, 2013.

Small Business Research Programs: Agencies Are Implementing New Fraud, Waste, and Abuse Requirements. [GAO-13-70R](#). Washington, D.C.: November 15, 2012.

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