

Small Business Innovation Research: Better Data and Clarity on Eligibility of Venture Capital-Owned Businesses Are Needed

GAO-24-107004

Q&A Report to Congressional Committees

February 13, 2024

Why This Matters

Small businesses have been a major source of technology development in the U.S. economy but can face challenges obtaining the funding and investment needed to fully develop and commercialize their technologies. The Small Business Innovation Research (SBIR) program was established in 1982 by the Small Business Innovation Development Act to increase the participation of small innovative companies in federally funded research and development (R&D) and to stimulate small businesses' technology development and commercialization.¹ The Small Business Administration (SBA) oversees the SBIR program and makes policies and provides program guidance. Eleven federal agencies participate in the program by making grants or other types of SBIR awards to small businesses. In fiscal year (FY) 2022, agencies made over 5,000 SBIR awards to small businesses valued at nearly \$4 billion, according to SBA data. To qualify for SBIR awards, small businesses must meet certain ownership and other eligibility criteria.

In 2011, Congress amended the Small Business Act to give participating agencies the authority to make SBIR awards to small businesses that are majority owned (more than 50 percent) by multiple venture capital operating companies (VCOC), hedge funds, or private equity firms.² We are referring to businesses with such ownership structures as "qualified small businesses." Prior to the 2011 amendment, such businesses were ineligible to participate in the SBIR program.

Agencies that use the authority to make SBIR awards to qualified small businesses must submit a written determination to the SBA Administrator and specified congressional committees.

The Small Business Act includes a provision for GAO to conduct a study of agencies' use of the authority and submit a report to Congress every 3 years. Our previous reports on agencies' use of the authority covered FY 2013 through 2020. This report, the fourth in the series, updates our previous work. We are providing information on the extent to which agencies elected to expand their SBIR programs to include qualified small businesses for FY 2021 through 2023 and on the factors that influenced these decisions.

Key Takeaways

- Four of the 11 SBIR-participating agencies, or components of those agencies, have used the authority to make SBIR awards to qualified small businesses since FY 2013. However, only the Departments of Defense (DOD) and of Health and Human Services (HHS) made awards to qualified small businesses from FY 2021 through 2023.

- The number of SBIR awards and dollars awarded to qualified small businesses appears to have increased substantially from FY 2021 through 2023 compared to prior years—largely due to the Air Force’s use of the authority starting in FY 2021. However, the full extent of the increase is currently unknown. DOD officials reported to us that, as a result of our review, they had uncovered issues with the reliability of DOD’s data used to identify its SBIR awards to qualified small businesses. The officials told us they are planning to add new internal controls in FY 2024 to improve the accuracy of DOD’s future data used to identify its awards to qualified small businesses.
- We recommended that DOD establish processes to monitor the effectiveness of efforts to improve the data quality. DOD agreed with the recommendation.
- Most participating agencies (seven of 11) have not used the authority to make SBIR awards to qualified small businesses. SBIR program officials at several of those agencies said that participation of VCOC-owned businesses would not fit with the aims of their SBIR program. However, according to SBIR regulations and SBA guidance, small businesses owned by one or more VCOCs, hedge funds, or private equity firms that are, themselves, small businesses may be eligible to participate in SBIR without an agency submitting a written determination to use the qualified small business authority.
- We recommended that SBA take steps to ensure all participating agencies fully understand program eligibility of small businesses with differing levels of ownership, such as by further clarifying SBA’s eligibility guide or developing model solicitation language. SBA disagreed with the recommendation, stating that it already clarified eligibility in SBIR regulations and through other means. However, we maintain that further steps are needed to help ensure agencies fully understand the eligibility of small businesses with differing levels of ownership and do not inappropriately exclude eligible businesses.

Which federal agencies participate in the SBIR program?

The Small Business Act requires agencies with extramural research obligations greater than \$100 million to participate in the SBIR program. The 11 agencies—including components within five of those agencies—that meet this criterion and participate in SBIR by making awards to small businesses are shown in table 1.

Table 1: Agencies that Participate and Make Awards in the Small Business Innovation Research (SBIR) Program

Participating agencies	Number of participating components
Department of Commerce	2
Department of Defense	13
Department of Energy	2
Department of Health and Human Services	4
Department of Homeland Security	2
Department of Education	N/A - agencywide
Department of Transportation	N/A - agencywide
Environmental Protection Agency	N/A - agencywide
National Aeronautics and Space Administration	N/A - agencywide
National Science Foundation	N/A - agencywide
U.S. Department of Agriculture	N/A - agencywide

Source: GAO-24-106400 and analysis of agency information. | GAO-24-107004

The 11 participating agencies are required to spend at least 3.2 percent of their extramural research obligations on their SBIR program each year.³ Each of the

participating agencies and components manages its own SBIR program and is governed by SBIR program regulations; a SBIR policy directive, which SBA created and periodically updates; and program guidance from SBA.⁴

How do eligibility requirements for qualified small businesses differ from requirements for most small businesses that participate in SBIR?

Eligibility requirements for qualified small businesses differ from those of most small businesses, mainly on business size, ownership, and control. Specifically:

- According to general eligibility criteria for most small businesses participating in SBIR (i.e., that are **not** qualified small businesses), businesses must:
 - Have 500 or fewer employees, including affiliated ownership companies,⁵ and
 - Either be majority owned and directly controlled by one or more individuals who are citizens or permanent legal residents of the U.S. or
 - Majority owned and directly controlled by one or more small businesses that meet the above criteria.⁶
- In contrast—in addition to being majority owned by multiple VCOCs, hedge funds, or private equity firms—qualified small businesses:
 - May have companies with more than 500 employees among their majority-owning companies; however, no single VCOC, hedge fund, or private equity firm may own a majority of the qualified small business;
 - May have foreign companies among their majority-owning companies; however, such companies must have a place of business in the U.S. and must be created or organized under U.S. or state law; and
 - Only receive SBIR awards from agencies or components that use the authority to make such awards (and no sooner than 30 days after the agency or component submitted a written determination to SBA and Congress).

What steps do agencies take to assess qualified small businesses' eligibility to participate in SBIR?

Agency officials told us that they generally rely on qualified small businesses to self-identify as such but take various steps to ensure businesses have done so correctly and to assess businesses' eligibility to participate in that agency's SBIR program. For example:

- SBA requires that all applicants to the SBIR program register with SBA and provide certain information on their company, including whether they are a qualified small business. SBA requests that registered companies review and, if necessary, update their registration no more than 6 months before submitting a SBIR proposal.
- Some agencies and components told us that their SBIR application process includes screening questions to identify whether applicants are a qualified small business.⁷ For instance, DOD's SBIR application portal asks applicants whether they have registered with SBA as a qualified small business and whether the business is majority owned by VCOCs, hedge funds, or private equity firms. National Aeronautics and Space Administration (NASA) officials told us their agency's application portal also uses screening questions and, given that the agency has not used the authority, is programmed to disallow companies that self-identify as a qualified small business to proceed with a SBIR application.

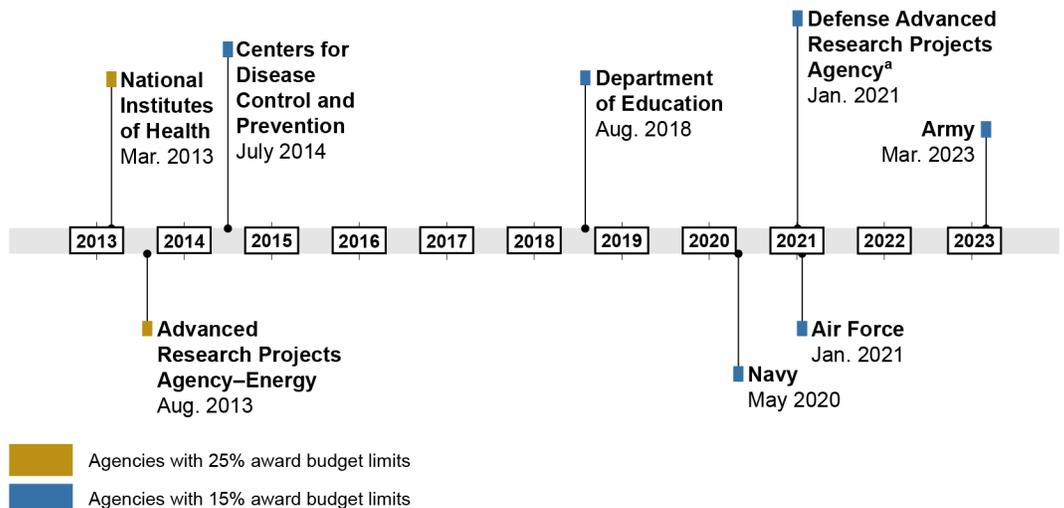
- All SBIR agencies are required to collect certification documents from businesses during the application process, which, among other things, requires those businesses to self-certify as to whether they are a qualified small business. An agency may collect certifications multiple times during the award process, or while the award is being carried out in case the company's ownership status has changed, according to SBA guidance and agency officials.

Several agencies and components told us, when they consider making an award to a small business, they may take steps beyond collecting self-certification documents to verify ownership status, such as interviewing the applicant and using a commercial database to check whether companies have received venture capital.

Which agencies have submitted a written determination to use the authority allowing them to make SBIR awards to qualified small businesses and why?

Four agencies (one agency and components of three other agencies) used the authority to make SBIR awards to qualified small businesses. Specifically, the Department of Education and components within DOD, the Department of Energy, and HHS have used the authority by submitting a written determination to SBA and congressional committees. The law and regulations governing this authority limit agencies' or components' awards to qualified small businesses to a specific percentage of their budgets designated for SBIR—either 15 percent or 25 percent, depending on the agency or component (see fig. 1).

Figure 1: Timeline of Agency Written Determinations to Use Special Authority to Make Awards to Qualified Small Businesses and Their Award Limits



Source: GAO analysis of agencies' written determinations under 15 U.S.C. § 638(dd). | GAO-24-107004

Note: Under a 2011 amendment to the Small Business Act, agencies that participate in the Small Business Innovation Research (SBIR) program may use special authority under 15 U.S.C. § 638(dd) to make SBIR awards to "qualified small businesses" (GAO's term)—small businesses that are majority owned by multiple venture capital operating companies, hedge funds, or private equity firms. To use this authority, agencies must first submit a written determination to the Small Business Administration and specified congressional committees. Agencies' awards to qualified small businesses are limited to 15 percent or 25 percent of their annual SBIR budget.

^aAccording to an SBIR program official from the Defense Advanced Research Projects Agency (DARPA), DARPA submitted its written determination to make SBIR awards to qualified small businesses in January 2021. It submitted a similar determination in May 2016 to allow DARPA to make such an award to a qualified small business under a specific topic. According to the DARPA official, it did not end up making the award.

In their written determinations to use the authority, agencies and components cited several reasons for wanting to allow qualified small businesses to participate in their SBIR programs. The most frequently cited reasons included:

- advancing the agency's or component's mission;

- attracting additional funding from VCOCs, hedge funds, or private equity firms to SBIR participants; and
- filling a need for publicly funded research.

Most agencies, regardless of whether they use the authority, told us that the statutory limit on the percentage of their SBIR budgets they can award to qualified small businesses (15 or 25 percent) did not influence their decision on whether to use the authority.

How many SBIR awards went to qualified small businesses from FY 2021 through 2023, including for a DOD pilot program involving similar awards?

The number of SBIR awards and dollars awarded to qualified small businesses appears to have increased substantially from FY 2021 through 2023 compared to prior years—largely due to Air Force’s use of the authority. However, the full extent of the increase is unknown because of reliability concerns with DOD’s data used to identify its SBIR awards to qualified small businesses. Officials from the DOD SBIR/STTR Program Office in the Office of the Undersecretary of Defense for Research & Engineering (OUSD(R&E)) told us they uncovered these data reliability concerns while responding to our data request for this review and said they are planning steps to address them.

In addition, a DOD pilot program that was similar to the qualified small business authority was authorized in December 2019 and ran through September 2022.

Awards to Qualified Small Businesses

Awards to qualified small businesses appear to have increased substantially in the 3-year period from FY 2021 through 2023, compared to the 6 years preceding that period. Although fewer agencies made awards using the authority from FY 2021 through 2023 as compared to the prior 6 years, the two agencies that made awards from FY 2021 through 2023, HHS and DOD, appear to have substantially increased their use during that 3-year period.⁸ Specifically:

- The National Institutes of Health (NIH) in HHS reported making around 70 SBIR awards valued at over \$60 million to qualified small businesses in the 3 years from FY 2021 through 2023. This is similar to the number and value of awards the agency made in the 6 years preceding that period, from FY 2015 through 2020. During that 6-year period, NIH made over 120 awards to qualified small businesses valued at nearly \$74 million.
- DOD reported making substantially more SBIR awards to qualified small businesses in FY 2021 through 2023 from more DOD components than in the 6 years preceding that period. Specifically, the Air Force, Army, Defense Advanced Research Projects Agency (DARPA), and Navy each reported making at least one award to a qualified small business from FY 2021 through 2023. According to OUSD(R&E) data, the components made roughly 80 SBIR awards with a total award value of over \$90 million to qualified small businesses from FY 2021 through 2023. During the 6 years preceding that period, only one DOD component, the Navy, had used the authority and made one award in FY 2020 to a qualified small business.
- One DOD component, Air Force, made nearly all—about 70 of the roughly 80—of DOD’s SBIR awards to qualified small businesses in FY 2021 through 2023. The awards by Air Force totaled around \$85 million. Air Force’s use of the authority beginning in 2021 led to DOD’s substantial increase in awards to qualified small businesses and—when considered with NIH’s awards—a governmentwide increase compared to the 6 years preceding Air Force’s use of the authority.

However, the full extent of the increase in awards to qualified small businesses is unknown. In November 2023, OUSD(R&E) officials told us they discovered issues with the reliability of data used to identify DOD's SBIR awards to qualified small businesses. The data are from the DOD SBIR application portal, which OUSD(R&E) manages and includes some data from companies applying for SBIR awards.⁹ The officials told us that, as a result of our review, they discovered inconsistencies in how some applicants answered the screening questions about whether they are a qualified small business. They also found that SBIR program officials at the component level were not always identifying the inconsistent responses and contacting applicants to clarify whether the company is eligible to participate in the component's SBIR program as a qualified small business—nor are they required to do so.

To address the data reliability concerns, OUSD(R&E) officials said they have recently begun working with system support contractors to implement new internal controls in the DOD-wide SBIR application portal. The new controls will use automated prompts to help ensure applicants answer the questions accurately about their status as a qualified small business. After the controls are in place, the officials said they will provide training to the components' SBIR program managers on the changes to the portal; however, the officials said they will not require that components follow up with applicants to clarify whether they are a qualified small business. In January 2024, the OUSD(R&E) officials said they expected the new controls to be operational by the end of FY 2024.

The OUSD(R&E) officials told us that, while the new controls will help improve the data accuracy in the future, they will not address inconsistencies currently in the data. They said an extensive effort would likely be required to address existing inconsistencies.

Like other agencies that use the authority, DOD is required to report to SBA on its awards made to qualified small businesses and to ensure that those awards do not exceed the allowable 15 percent of its agency budget designated for SBIR. In addition, federal internal control standards require that agencies monitor the effectiveness of internal controls, including ongoing monitoring of controls and separate periodic evaluations to provide feedback on the effectiveness of controls and ongoing monitoring.¹⁰

While DOD officials described the steps they are planning to take to improve the accuracy of the data, the steps do not yet include a longer-term process, such as a methodology and timeframes, to periodically monitor the effectiveness of the internal control changes to help ensure sustained improvement in data quality. Periodic monitoring could, for example, include cross-checking DOD's award data against companies' SBA-required registrations as qualified small businesses. Without accurate data on such awards, DOD and components cannot know if they are reporting accurately to SBA and may not be able to know whether they are approaching the statutory 15 percent limit.

DOD Pilot

The National Defense Authorization Act for Fiscal Year 2020 includes a provision establishing a pilot program under DOD's SBIR program.¹¹ Under the pilot, which was to begin no later than December 2020, DOD and its components could make SBIR awards to businesses that are majority owned by multiple VCOCs, hedge funds, or private equity firms without submitting a written determination to use the qualified small business authority. However, unlike awards to qualified small businesses, awards under the pilot are limited to 10 percent of DOD's SBIR budget (as opposed to 15 percent for awards to qualified small businesses), and awards to businesses with foreign ownership were only allowed under certain conditions.¹² The pilot expired in September 2022.

No DOD components reported participating in the pilot, according to written responses we received from them. Two components stated they did not participate because they had already used the authority to make awards to qualified small businesses. Officials from four other components, none of which used the qualified small business authority, stated they were unaware of the pilot. The OUSD(R&E) officials said some components may have been unaware of the pilot because their SBIR personnel change frequently. Furthermore, SBIR officials from SBA and OUSD(R&E) told us they did not issue policies or guidance about the pilot, nor did they encourage or discourage participation.

What do agencies know about qualified small businesses' level of interest in participating in the SBIR program?

Agencies know little about qualified small businesses' level of interest in participating in the SBIR program. There are several reasons for this, including:

- DOD's data on SBIR proposals provided the greatest indication of potential interest from qualified small businesses, although the data are affected by the reliability concerns described above. According to DOD's data, the agency received approximately 400 SBIR proposals from qualified small businesses from FY 2021 through 2023, including over 300 to Air Force and more than 80 to the Navy, Army, and DARPA—all of which used the authority to make SBIR awards to qualified small businesses.¹³ As noted above, DOD reported making roughly 80 awards to such businesses in those years. The number of proposals received compared to the number of awards made may indicate the level of unmet interest. However, the actual number of DOD's proposals from qualified small businesses is unknown because data on proposals come from the DOD SBIR application portal affected by the reliability concerns.
- In contrast, other agencies or components that use the authority to make awards to qualified small businesses either funded most of their proposals from qualified small businesses or reported receiving few such proposals. For example, NIH reported that it funded most of the proposals it received from qualified small businesses, funding roughly 50 of the over 60 proposals received for competitive awards from FY 2021 through 2023.¹⁴ The Department of Energy's Advanced Research Projects Agency-Energy (ARPA-E) reported receiving only one SBIR proposal from a qualified small business in those years, which did not result in an award.
- Department of Education, which also used the authority but did not make any awards to qualified small businesses from FY 2021 through 2023, could not provide the number of proposals received from qualified small businesses in those years. SBIR program officials from the department told us they do not track information electronically on proposals received from qualified small businesses. The officials said that providing that number would require a manual search through all their FY 2021 through 2023 proposals. While the department, like other SBIR agencies, is required to report data annually to SBA on their SBIR proposals and awards, SBA's policy directive for SBIR does not require agencies to report on proposals received from qualified small businesses—only awards.
- Whether or not they use the authority, agencies and components reported making few, if any, efforts to assess interest from qualified small businesses or conduct outreach. Officials from nine agencies or components told us they have not assessed the level of interest from qualified small businesses because they have not used the authority and studying the level of interest would not be a good use of their limited resources. Most agencies and components, including those that have used the authority, told us they have received few, if any, inquiries about allowing qualified small businesses to participate in their SBIR programs. Several of them also said their outreach to

companies is more targeted to specific communities or technologies rather than qualified small businesses.

What did agencies cite as the main benefits and drawbacks of allowing qualified small businesses to participate in SBIR?

Officials at agencies and components cited potential benefits of allowing qualified small businesses to participate in their SBIR program, such as an increase in their applicant pool, or drawbacks such as increased risk of foreign threat.

Benefits

Officials at agencies or components that use the authority to make SBIR awards to qualified small businesses cited potential benefits such as:

- **Expanding the SBIR applicant pool.** Officials at three of the components—ARPA-E, DARPA, and Navy—said that allowing participation of such companies could increase the size and the variety of companies in their agency’s SBIR applicant pool. ARPA-E officials also cited stronger SBIR proposals from companies with more resources to spend on developing their application. An NIH official cited a 2009 study by the National Academies of Sciences, Engineering, and Medicine which found that providing awards to such businesses may further encourage commercially promising and innovative small firms to participate in SBIR.¹⁵
- **Aiding technology commercialization.** Officials at the Department of Education said making awards to companies that have already obtained private funding could improve the chances that an SBIR award will result in a commercialized technology.
- **Attracting future investment.** Some agencies told us that developing some technologies, such as pharmaceuticals, requires significant private investment, and having an SBIR award from an agency can help attract future investment.

Officials at some of the agencies or components that did not use the authority cited similar potential benefits.

Drawbacks

Officials—mainly at agencies and components that did not use the authority—cited several potential drawbacks of allowing qualified small businesses to participate in their SBIR programs. For example:

- **Misalignment with the agency’s or component’s aims for their SBIR program.** Several agencies or components that do not allow qualified small businesses’ participation told us they view their agencies as early-stage funders. As such, they said they target companies with little, if any, private funding or with less mature technologies in order to maximize the impact of the SBIR award. They said that making awards to companies that already have substantial private funding could disadvantage smaller, less-resourced companies in the competition for SBIR awards and would leave less SBIR funding for companies that have not yet received much private funding.
- **Administrative burden.** Officials at several agencies and components said they already receive a sufficient number of high-quality applications and did not believe it would be worthwhile to encourage applications from qualified small businesses. Doing so, they said, would add to the agencies’ administrative tasks and increase their reporting requirements.
- **Increased risk of foreign threat.** Officials at some agencies and components said that allowing participation of qualified small businesses would increase their burden of evaluating foreign ownership under new

requirements for SBIR awards and could increase risk of foreign threat. As we reported in November 2023, the 11 agencies established new processes for evaluating foreign ownership and foreign risk of companies receiving SBIR awards.¹⁶ Several officials stated that qualified small businesses may be difficult to evaluate for foreign threat risk, further complicating the new process. Awards to such companies could also increase risk of foreign threats, such as theft of U.S. intellectual property, according to officials and our November 2023 report.

To what extent are agencies following federal requirements regarding the eligibility of venture capital-owned businesses to participate in the SBIR program?

Some agencies or components that did not use the authority for qualified small businesses may be inappropriately excluding some small businesses from participating in the SBIR program.¹⁷ Specifically, SBIR program regulations and SBA guidance allow businesses with VCOC, hedge fund, or private equity ownership to participate in SBIR—provided such businesses and their owners meet the general eligibility requirements in SBIR regulations that apply to most small businesses.¹⁸ If such businesses meet the general eligibility requirements of a small business, they are eligible to participate in SBIR without an agency or component submitting a written determination to use the special authority for qualified small businesses. Furthermore, such businesses can have one or multiple VCOC, hedge fund, or private equity owners with any percentage of ownership (provided that their ownership companies are, themselves, small businesses, as defined in SBIR regulations).¹⁹

Agencies and components—including some within the same agency—varied in whether they would allow such businesses that meet the general eligibility requirements of a small business to participate in their SBIR programs, according to our interviews with officials and our review of FY 2023 solicitations. In particular, most agencies or components that did not use the qualified small business authority said they would not allow such businesses to participate in their SBIR program (see fig. 2).

Figure 2: Extent of Small Business Innovation Research (SBIR) Program Participation for Businesses Owned by Venture Capital Operating Companies (VCOC) or Other Owners, as of December 2023

	Made a written determination to use 15 U.S.C. § 638(dd) authority to make SBIR awards to qualified small businesses?	Would allow a company that is majority owned by small-business VCOCs, hedge funds, or private equity firms to participate in their SBIR program	Would NOT allow such a company to participate in their SBIR program
	Yes No		
Dept. of Education	<input checked="" type="checkbox"/>	✓	
Dept. of Energy: Advanced Research Projects Agency-Energy	<input checked="" type="checkbox"/>	✓	
Dept. of Defense: 4 components ^a	<input checked="" type="checkbox"/>	✓	
Dept. of Health & Human Services: National Institutes of Health, Centers for Disease Control and Prevention	<input checked="" type="checkbox"/>	✓	
Dept. of Energy: Office of Science	<input type="checkbox"/>	✓	
Dept. of Defense: 3 components ^b	<input type="checkbox"/>	✓	
National Science Foundation	<input type="checkbox"/>	✓	
Dept. of Commerce: National Institute of Standards and Technology, National Oceanic and Atmospheric Administration	<input type="checkbox"/>		✓
Dept. of Defense: 6 components ^c	<input type="checkbox"/>		✓
Dept. of Homeland Security	<input type="checkbox"/>		✓
Dept. of Transportation	<input type="checkbox"/>		✓
Environmental Protection Agency	<input type="checkbox"/>		✓
National Aeronautics & Space Administration	<input type="checkbox"/>		✓
U.S. Dept. of Agriculture	<input type="checkbox"/>		✓

Source: GAO analysis of agency documents and interviews. | GAO-24-107004

^aAir Force, Army, Defense Advanced Research Projects Agency, and Navy.

^bChemical and Biological Defense program, Defense Microelectronics Activity, and Office of the Secretary of Defense.

^cDefense Health Agency, Defense Logistics Agency, Defense Threat Reduction Agency, Missile Defense Agency, National Geospatial-Intelligence Agency, and Special Operations Command.

As noted in the figure, the eight agencies or components that use the authority for qualified small businesses told us they would allow companies that are majority owned by small VCOCs, hedge funds, or private equity firms to participate in their SBIR program. However, only one of the eight said that awards to such companies would be distinct from awards to qualified small businesses and would not count against the agency percentage caps on making awards to qualified small businesses.

Several agencies or components that did not use the qualified small business authority also told us they would allow SBIR participation by companies that are majority owned by small VCOCs, hedge funds, or private equity firms. One component, the Department of Energy’s Office of Science, revised an SBIR

solicitation for FY 2023 to clarify that such businesses were eligible to apply, even though it had not used the qualified small business authority.

In contrast, SBIR program officials at most of the remaining agencies or components said they would not allow such businesses to participate in their SBIR programs, because they would need to use the qualified small business authority. Officials from one agency said they believed that majority ownership, alone, by VCOCs, hedge funds, or private equity firms would require them to use the authority to make awards to qualified small businesses. Officials from another agency said that the qualified small business authority does not distinguish between small or large ownership companies; because they have not elected to use that authority, they would not make awards to majority VCOC-owned companies, even if the owners are small businesses. Still other officials reiterated that making awards to VCOC-owned companies did not fit with the aims for their SBIR program.

According to SBA's policy directive for SBIR, SBA is responsible for monitoring that agencies do not promulgate policies, rules, regulations, or interpretations that are inconsistent with the Small Business Act, the policy directive, or SBIR regulations.²⁰ In June 2016, SBA revised its SBIR regulations to clarify that VCOC-owned businesses that meet the general eligibility requirements for small businesses were eligible to apply for SBIR awards without an agency using the qualified small business authority, according to SBA. SBA's 2013 update to its SBIR eligibility guide also reflects this clarification. In October 2023, SBA officials told us that there were many discussions with agencies around the time the authority was instituted in 2011, but they were not aware of any recent inquiries with respect to eligibility of firms that are majority owned by multiple VCOCs.

In December 2023, SBA officials said that, as a result of our review, they briefed the agencies on the eligibility of such businesses at the October 2023 interagency meeting of SBIR program managers. Nevertheless, our follow up interviews after this meeting revealed that not all agencies and components were aware of the briefing or may have fully understood VCOC-owned companies' eligibility to participate in SBIR. Furthermore, officials from several of the agencies or components told us, during our review, that eligibility issues in this area are potentially confusing, even with SBA's updates to its SBIR regulations and eligibility guide.

Without fully understanding the eligibility of companies owned by small VCOCs, hedge funds, or private equity firms, participating agencies may inappropriately exclude such companies from applying for and potentially receiving awards—contrary to SBIR program regulations and SBA guidance.

Conclusions

Agencies may derive some benefits by including qualified small businesses in their SBIR programs, but those that do so are responsible for tracking and reporting accurately on their awards and spending. DOD's proposed enhancements to its SBIR application portal and retraining of SBIR personnel are promising steps to help improve the accuracy of DOD's data. As with many internal controls, however, effective monitoring and periodic assessment are important to ensure data quality over time.

For agencies that do not use the qualified small business authority, SBA's efforts to describe business eligibility have not fully clarified this complex issue. As a result, eligible small businesses may be inappropriately excluded from some agencies' SBIR programs. Further steps, such as developing model solicitation language similar to that developed by the Department of Energy's Office of Science, could help provide clearer guidance for agencies.

Recommendations for Executive Action

We are making a total of two recommendations—one to DOD and one to SBA:

The Secretary of Defense should ensure that the DOD SBIR/STTR Program Office in OUSD(R&E) or other appropriate entity monitors the effectiveness of the recent efforts to improve the quality of the data used to identify its SBIR awards to “qualified small businesses” (awarded under 15 U.S.C. § 638(dd)), including through periodic evaluations of the accuracy of DOD’s data in identifying awards to such businesses. (Recommendation 1)

The Administrator of the SBA should take steps—such as clarifying the SBIR policy directive or eligibility guide or suggesting model language for SBIR solicitations—to ensure that all agencies participating in the SBIR program fully understand the eligibility of small businesses with differing levels of ownership by VCOCs, hedge funds, or private equity firms. (Recommendation 2)

Agency Comments and Our Evaluation

We provided a draft of this report to SBA and the 11 SBIR-participating agencies for review and comment.

In its response to our draft report (see Appendix I), DOD agreed with our recommendation to the Secretary of Defense.

SBA disagreed with our recommendation to the Administrator, stating that program eligibility is clearly defined in SBIR regulations and guidance, and that SBA has already addressed this topic at the October 2023 interagency program managers’ meeting. See Appendix II for SBA’s response. We maintain that our recommendation is still warranted. Evidence presented in the report demonstrates that some agencies still do not fully understand program eligibility in this area, even after SBA’s various efforts to clarify eligibility.

DOD, HHS, NASA, and SBA provided us technical comments which we incorporated, as appropriate, in the report. In its technical comments, SBA stated that the draft title “Small Business Innovation Research: The Small Business Administration Should Further Clarify Program Eligibility” did not capture all key findings and recommendations. In response, we revised the title to reflect both recommendations.

The other SBIR-participating agencies—including the Departments of Agriculture, Commerce, Education, Energy, Homeland Security, and Transportation, as well as the Environmental Protection Agency and the National Science Foundation—had no comments on our report.

How GAO Did This Study

We reviewed laws and regulations governing SBIR program eligibility for small businesses, in general, and qualified small businesses. We also reviewed SBA’s policy directive and eligibility guidance for the SBIR program; agencies’ funding solicitations for SBIR awards; and written determinations by agencies and components that use the qualified small business authority.

For the 11 participating agencies and most of their components that make SBIR awards, we obtained agency- or component-level data on SBIR proposals received from, and awards to, qualified small businesses, if any, from FY 2021 through 2023. We requested but did not receive data from the Administration for Community Living, one of the four components of HHS that participate in SBIR.

For agencies and components that reported making awards to qualified small businesses in those years—namely, NIH in HHS and four DOD components—we took limited steps to assess data reliability. For NIH, we assessed the extent to which companies receiving an SBIR award as a qualified small business had registered as such with SBA, according to SBA company registry data through FY 2021. We performed similar steps using DOD’s award data, and we

interviewed DOD officials in OUSD(R&E) and Air Force about apparent discrepancies in DOD-wide and component-level data. Based on these steps, we determined the NIH and DOD data were sufficiently reliable for describing overall trends in awards to qualified small businesses but not for reporting precise numbers of awards or dollars awarded.

We also interviewed SBIR program officials in SBA and the 11 participating agencies; obtained agencies' and components' written responses to questions; or both. We obtained written responses from the 13 DOD components that participate in SBIR but did not interview all the components.

The interviews and written responses addressed various topics, including agencies' or components' reasons for using or not using the authority to make SBIR awards to qualified small businesses; outreach efforts, if any, to such businesses; and the clarity of SBIR policies or guidance on awards to businesses with VCOC, hedge fund, or private equity ownership—among other topics.

We conducted this performance audit from August 2023 to February 2024 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.

List of Addressees

The Honorable Jeanne Shaheen
Chair
The Honorable Joni K. Ernst
Ranking Member
Committee on Small Business and Entrepreneurship
United States Senate

The Honorable Roger Williams
Chair
The Honorable Nydia M. Velázquez
Ranking Member
Committee on Small Business
House of Representatives

We are sending copies of this report to the appropriate congressional committees, the Secretaries of Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, Homeland Security, and Transportation; the Administrators of the SBA, the Environmental Protection Agency, and NASA; the Director of the National Science Foundation; and other interested parties.

GAO Contact Information

For more information, contact: Candice N. Wright, Director, Science, Technology Assessment, and Analytics, WrightC@gao.gov, (202) 512-6888.

Chuck Young, Managing Director, Public Affairs, YoungC1@gao.gov, (202) 512-4800.

A. Nicole Clowers, Managing Director, Congressional Relations, ClowersA@gao.gov, (202) 512-4400.

Staff Acknowledgments: Christopher Murray (Assistant Director), Jeff Rueckhaus (Analyst-in-Charge), Theresa Anderson, Victoria Aysola, Anika McMillon, and Fralinda Zazay.

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Appendix I: Comments from the Department of Defense



RESEARCH
AND ENGINEERING

DEPUTY UNDER SECRETARY OF DEFENSE
3030 DEFENSE PENTAGON
WASHINGTON, DC 20301-3030

January 29, 2024

Ms. Candice Wright
Director
Science, Technology Assessment, and Analytics
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Wright:

This is the Department of Defense (DoD) response to the Government Accountability Office (GAO) Draft Report GAO-24-107004, "Small Business Innovation Research: The Small Business Administration Should Further Clarify Program Eligibility," dated December 29, 2023 (GAO Code 107004). My point of contact is Ms. Regina Sims, Director, DoD Small Business Innovation Research and Small Business Technology Transfer Program, at regina.a.sims.civ@mail.mil or 202-604-2467.

Sincerely,

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David A. Honey, PhD

Enclosures:

1. Summary of Recommendations
2. Technical Comments

**GAO DRAFT REPORT DATED DECEMBER 29, 2023
GAO-24-107004 (GAO CODE 107004)**

**“Small Business Innovation Research: The Small Business Administration Should
Further Clarify Program Eligibility”**

**DEPARTMENT OF DEFENSE COMMENTS
TO THE GAO RECOMMENDATION**

RECOMMENDATION 1: The GAO recommends that the Secretary of Defense should ensure that the DOD SBIR/STTR Program Office in OUSD(R&E) or other appropriate entity monitors the effectiveness of the recent efforts to improve the quality of the data on its SBIR awards to “qualified small businesses” (awarded under 15 U.S.C. § 638(dd)), including through periodic evaluations of the accuracy of DOD’s data in identifying awards to such businesses. (Recommendation 1)

DoD RESPONSE: Concur.

Appendix II: Comments from the Small Business Administration



January 26, 2024

Candice N. Wright
Director
Science, Technology Assessment, and Analytics
U.S. Government Accountability Office
441 G Street, N.W.
Washington, DC 20548

Dear Candice N. Wright:

Thank you for providing the U. S. Small Business Administration (SBA) with a copy of the Government Accountability Office (GAO) draft report titled “Small Business Innovation Research: The Small Business Administration Should Further Clarify Program Eligibility”, GAO-24-107004.

SBA has reviewed the draft report and disagrees with the recommendation received.

Recommendation 1: The Administrator of the Small Business Administration should take steps—such as clarifying the SBIR policy directive or eligibility guide or suggesting model language for SBIR solicitations—to ensure that all agencies participating in the SBIR program fully understand the eligibility of small businesses with differing levels of ownership by VCOCs, hedge funds, or private equity firms.

SBA Response: SBA has properly defined eligibility for the SBIR program at 13 CFR 121.702, and the SBIR/STTR Policy Directive references this section in defining eligible small business concerns. The scenario outlined by GAO is addressed at 13 CFR 121.702 (a)(2), and the scenario is further addressed in the SBIR/STTR program eligibility guide on page 5. Therefore, SBA believes eligibility is clearly defined. SBA does agree with ensuring that all agencies understand eligibility requirements and has already addressed this topic during an interagency Program Managers meeting.

Thank you for the opportunity to comment on this draft report.

Sincerely,
ERICK PAGE-
LITTLEFORD

Digitally signed by ERICK
PAGE-LITTLEFORD
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Erick Page-Littleford
Acting Director, Small Business Innovation Research and Technology Transfer (SBIRTT)
Office of Investment & Innovation
U.S. Small Business Administration

Endnotes

¹The Small Business Innovation Development Act of 1982 established the SBIR program. Pub. L. No. 97-219, 96 Stat. 217. This act amended section 9 of the Small Business Act, Pub. L. No. 85-536, 72 Stat. 384 (1958), codified as amended at 15 U.S.C. § 638.

²SBIR/STTR Reauthorization Act of 2011 (Reauthorization Act), Pub. L. No. 112-81, div. E, § 5107(a), 125 Stat. 1822, 1827 (codified as amended at 15 U.S.C. § 638(dd)). For the purposes of this report, a “qualified small business” refers to small business concerns, as that term is defined in 15 U.S.C. § 632(a), that are owned in majority part by multiple venture capital operating companies, hedge funds, or private equity firms (consistent with the definition of those terms at 15 U.S.C. § 632(aa)-(cc)), that are eligible for SBIR awards under 15 U.S.C. § 638(dd). The Section 638(dd) authority only applies to awards under the SBIR program and does not apply to awards under a similar program, Small Business Technology Transfer (STTR).

³Agencies' R&D efforts 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.

⁴For additional background on the SBIR program, see, for example, GAO, *Small Business Research Programs: Most Agencies Allow Applicants to Define Needs and Propose Solutions*, [GAO-23-106338](#), (Washington, D.C.: Sept. 29, 2023), and GAO, *Small Business Research Programs: Reporting on Award Timeliness Could be Enhanced*, [GAO-23-105591](#), (Washington, D.C.: Oct. 12, 2022). For our prior reports on agencies' use of the authority to make SBIR awards to qualified small businesses, see GAO, *Small Business Innovation Research: Three Agencies Made Awards to Businesses Majority-Owned by Investment Companies and Funds*, [GAO-21-223R](#) (Washington, D.C.: Jan. 29, 2021); GAO, *Small Business Innovation Research: Few Agencies Made Awards to Small Businesses Majority-Owned by Multiple Venture Capital Operating Companies, Hedge Funds, or Private Equity Firms*, [GAO-19-205R](#) (Washington, D.C.: Dec. 21, 2018); and GAO, *Small Business Innovation Research: Change in Program Eligibility Has Had Little Impact*, [GAO-15-68](#) (Washington, D.C.: Nov. 20, 2014).

⁵The 500-employee maximum includes the employees of affiliates, which, according to 13 C.F.R. § 121.702(c) and SBA's *Guide to SBIR/STTR Program Eligibility (updated Jan. 2013)* are concerns and entities having the power to control the small business that would participate in the program.

⁶Size and eligibility standards applicable to SBIR programs are codified in 13 C.F.R. § 121.701(a) and interpreted by SBA in its Jan. 2013 *Guide to SBIR/STTR Program Eligibility*.

⁷Throughout this report, we refer to indefinite quantities of the 11 agencies, including the 21 components within five of those agencies, that participate in the SBIR program and provided information for this review. For a specified set or subset of agencies or components, "several" may refer to a quantity ranging from one member of the set or subset to approximately one-third of members. "Some" may refer to a range of approximately one- to two-thirds. "Most" may refer to a quantity greater than two-thirds but less than all members of the set or subset.

⁸In our prior report, the Departments of Education and Energy reported making at least one award to a qualified small business in FY 2015 through 2020. See [GAO-21-223R](#). In late 2023, the two agencies reported to us that they had not made any awards to qualified small businesses from FY 2021 through 2023.

⁹This system is the Defense SBIR/STTR Innovation Portal, or DSIP.

¹⁰GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: Sept. 2014). Principle 16, Perform Monitoring Activities, describes requirements for federal managers to monitor their agency's internal control systems through ongoing monitoring and separate evaluations, such as audits and testing of the effectiveness of specific controls.

¹¹National Defense Authorization Act for Fiscal Year 2020, Pub. L. 116-92, div. A, § 884, 133 Stat. 1198, 1534. Pilot Program for Domestic Investment Under the SBIR Program.

¹²SBIR awards under the DOD pilot were limited to businesses (a) exclusively owned by multiple U.S.-owned VCOCs, hedge funds, or private equity firms or (b) majority owned by U.S.-owned VCOCs, etc., with any foreign ownership limited to minority ownership by members of the national technology and industrial base, as defined under 10 U.S.C. § 2500(1) (2020) (current version at 10 U.S.C. § 4801(a)).

¹³The remainder of the roughly 400 proposals DOD reported receiving from qualified small businesses from FY 2021 through 2023 were made to DOD components that did not submit a written determination to use the authority, according to DOD's data.

¹⁴NIH reported making around 70 competitive and non-competitive awards to qualified small businesses from FY 2021 through 2023. For the roughly 50 awards that NIH competitively awarded in those years, it reported receiving over 60 proposals.

¹⁵National Research Council of the National Academies, *Venture Funding and the NIH SBIR Program* (Washington, D.C.; National Academies Press, 2009).

¹⁶For additional information, see GAO, *Small Business Research Programs: Agencies Are Implementing Programs to Manage Foreign Risks and Plan Further Refinement*, [GAO-24-106400](#) (Washington, D.C.: Nov. 16, 2023).

¹⁷Such businesses are not required to self-identify to SBA. Many of the SBIR-participating agencies or components told us that, to their knowledge, they had not made awards to such businesses.

¹⁸Essentially, these are small businesses which meet the general eligibility requirements in SBIR regulations at 13 C.F.R. § 121.702(a) but "happen" to have VCOC, hedge fund, or private equity ownership.

¹⁹In contrast, as noted earlier, VCOC, hedge fund, or private equity owners of qualified small businesses are not required to meet the general eligibility requirements of a small business in SBIR regulations. However, according to an SBIR program official from SBA, qualified small businesses—like small businesses in general, under SBIR regulations—may not be majority owned by foreign companies.

²⁰SBA, *Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Program Policy Directive, Effective May 3, 2023*.