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SUMMARY

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Small Business Research Programs: Selected Issues for Reauthorization

Congress established two programs that support small business research and development (R&D): the Small Business Innovation Research (SBIR) program and the Small Business Technology Transfer (STTR) program. The SBIR and STTR programs have been modified several times since their initial enactments. On September 30, 2025, the authority for the programs expires.

The SBIR program was established in 1982 by the Small Business Innovation Development Act (P.L. 97-219) to increase the participation of small, innovative companies in federally funded R&D. The act requires each federal agency with an extramural R&D budget above $100 million to set aside a portion of these funds to finance an agency-run SBIR program. As of the publication of this report, 11 federal agencies operate SBIR programs. A complementary program, the STTR program, was created by the Small Business Research and Development Enhancement Act of 1992 (P.L. 102-564) to facilitate the commercialization of university and federal R&D by small companies. Each agency with an extramural R&D budget in excess of $1 billion is required to set aside a portion of these funds to finance an agency-run STTR program. As of the publication of this report, six federal agencies operate STTR programs.

Both the SBIR and STTR programs have three phases. Phase I awards fund feasibility-related R&D. Phase II awards fund the development of prototypes or other R&D that advances work initiated in Phase I that meets a particular agency program need or exhibits the potential for commercial application. Phase III is focused on commercialization of the results of Phase I and Phase II awards; the SBIR and STTR programs do not provide funding in Phase III but offer other incentives for federal procurement (i.e., sole source contracting).

This report discusses selected policy issues Congress may consider as it debates reauthorization of the programs, including the effectiveness of efforts to mitigate foreign influence and interference in the SBIR and STTR programs; program eligibility, in particular the participation of multiple award recipients in the programs; and the commercialization of SBIR- and STTR-derived technologies and services. In examining these issues, the report describes various provisions included in legislation introduced in the 119th Congress—in particular, the Investing in National Next-Generation Opportunities for Venture Acceleration and Technological Excellence (INNOVATE) Act (S. 853 and H.R. 4777) and the SBIR/STTR Reauthorization Act of 2025 (S. 1573 and H.R. 3169)—and how this legislation would reauthorize and modify the SBIR and STTR programs.

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Introduction

Small businesses are often viewed as being critical to the economy—creating jobs, improving productivity, and advancing innovation. Congress has a long-standing interest in supporting the formation and growth of small businesses—which are generally defined as businesses with less than 500 employees. In particular, Congress established the Small Business Innovation Research (SBIR) program in 1982 and the Small Business Technology Transfer (STTR) program in 1992, both with the aim of increasing small business participation in federally funded research and development (R&D).[1]

The SBIR and STTR programs have been extended and reauthorized several times since their initial enactments, most recently through the SBIR and STTR Extension Act of 2022 (P.L. 117-183). On September 30, 2025, the authority for these two programs expires.

This report provides a high-level overview of the SBIR and STTR programs and then discusses selected policy issues Congress may consider as it debates reauthorization of the programs. For detailed information on the SBIR and STTR programs, see CRS Report R43695, *Small Business Research Programs: SBIR and STTR*.

Overview of the SBIR and STTR Programs

The objectives of the SBIR and STTR programs are (1) to stimulate innovation, (2) to use small businesses to meet federal R&D needs, (3) to foster and encourage the participation of small businesses owned by women and by socially and economically disadvantaged persons in technological innovation, and (4) to increase private sector commercialization of innovations derived from federally funded R&D, including through research partnerships.[2]

Execution of the SBIR and STTR programs is decentralized across federal agencies. Each participating agency operates its own SBIR and STTR program in accordance with the statutory provisions at 15 U.S.C. §638 and guidance issued by the Small Business Administration (SBA)—the *Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Program Policy Directive*.[3] SBA's Office of Investment and Innovation is responsible for providing coordination across federal-agency-managed SBIR and STTR programs, issuing agency guidance, reviewing and monitoring agency progress, and reporting annually to Congress on the operation and execution of the SBIR and STTR programs.

The SBIR and STTR programs are funded as set-asides from the extramural R&D budgets of federal agencies with budgets above a certain threshold. Federal R&D funding can be characterized as either *extramural* or *intramural* depending on the individuals and organizations performing the R&D. Extramural R&D is performed by organizations outside the federal sector that conduct R&D with federal funds under contracts, grants, or other agreements (e.g., cooperative agreements or other transactions). Extramural R&D performers include universities and colleges, industrial firms, state and local governments, and foreign researchers. Intramural

[1] Small Business Innovation Development Act of 1982 (P.L. 97-219) and Small Business Research and Development Enhancement Act of 1992 (P.L. 102-564).

[2] 15 U.S.C. §638 and Small Business Administration (SBA), Office of Investment and Innovation, *Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Program Policy Directive*, May 3, 2023, p. 2, https://www.sbir.gov/sites/default/files/2024-07/SBA%20SBIR_STTR_POLICY_DIRECTIVE_May2023.pdf (hereinafter SBA, *Policy Directive*).

[3] The SBA *Policy Directive* is required under 15 U.S.C. §638(j) and 15 U.S.C. §638(p).

R&D is performed by employees of a federal agency through government-owned, government-operated facilities.[4]

An agency's extramural R&D budget and the amount it must set aside from such funds for an SBIR or STTR program cannot be determined directly from annual appropriations acts. Agency extramural R&D funding can come from more than one appropriations account, and such accounts can include activities and programs that are not related to R&D. Additionally, an R&D appropriations account can support research conducted by both intramural and extramural performers.

Each federal agency with an extramural R&D budget above $100 million is required by law to set aside at least 3.2% of such funding each year for an agency-run SBIR program.[5] Currently, 11 federal agencies participate in the SBIR program: the Departments of Agriculture (USDA), Commerce (DOC), Defense (DOD), Education (ED), Energy (DOE), Health and Human Services (HHS), Homeland Security (DHS), and Transportation (DOT); the Environmental Protection Agency (EPA); the National Aeronautics and Space Administration (NASA); and the National Science Foundation (NSF).

Similarly, each federal agency with an extramural R&D budget of in excess of $1 billion is required, annually, to allocate at least 0.45% of such funding for an agency-run STTR program.[6] Six federal agencies—DOD, DOE, HHS, NASA, NSF, and USDA—participate in the STTR program.

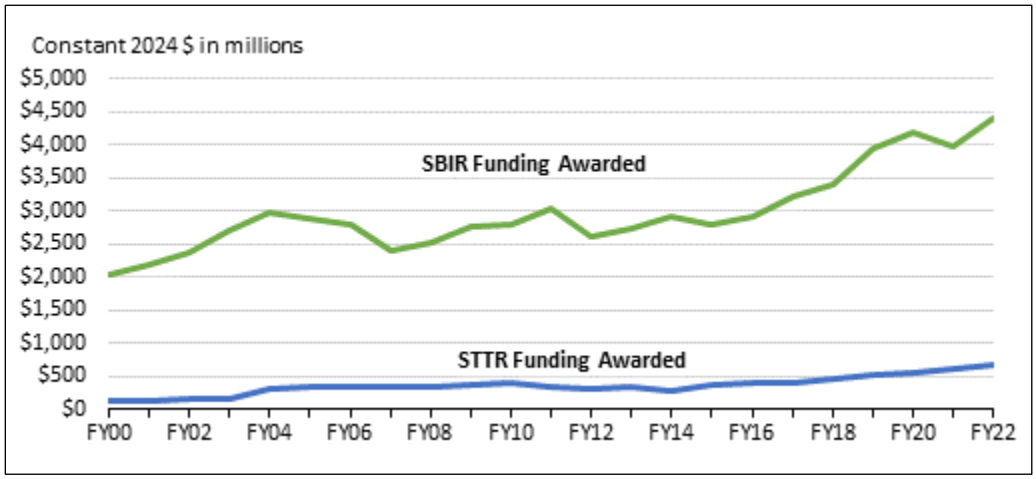
Figure 1 shows aggregate SBIR and STTR funding awarded from FY2000 though FY2022—the most recent year for which SBA has published annual report data—in constant dollars. In FY2022, federal agencies obligated $4.4 billion in SBIR awards and $662.3 million in STTR awards to small businesses.

[4] A federally funded research and development center (FFRDC) is a special type of government-owned, contractor-operated research center that conducts research and development (R&D) and related activities in support of a federal agency's mission. Historically, FFRDCs have been classified as extramural R&D performers and, per the definition of *extramural budget* at 15 U.S.C. §638(e)(1), remain so for the purposes of the SBIR and STTR programs. The National Center for Science and Engineering Statistics (NCSES) within the National Science Foundation (NSF), however, as of FY2021, reclassified FFRDCs as intramural performers "because FFRDCs are reliant on federal funding and are controlled by a governmental unit." See Christopher V. Pece, *Reclassification of Federally Funded Research and Development Centers as Federal Intramural Performers of R&D*, NCSES, NSF 24-312, January 2, 2024, https://ncses.nsf.gov/pubs/nsf24312.

[5] 15 U.S.C. §638(f). The law identifies only a minimum percentage; an agency may set aside more.

[6] 15 U.S.C. §638(n)(B)(v). The law identifies only a minimum percentage; an agency may set aside more.

Figure 1. SBIR and STTR Funding Awarded, FY2000-FY2022

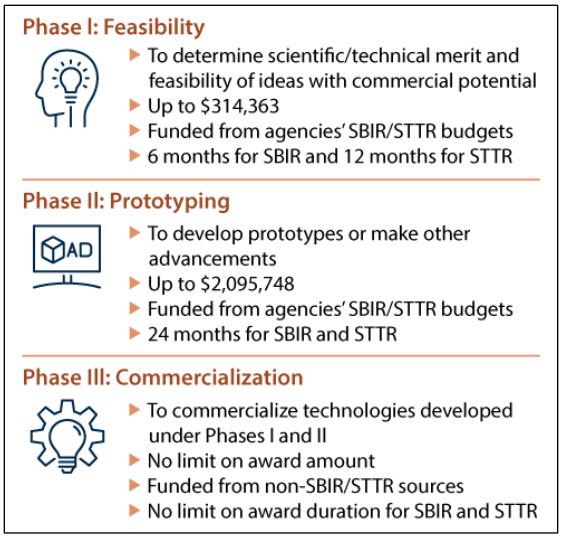


Source: CRS analysis. Data for FY2000-FY2011 from Small Business Administration (SBA), *Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Program Annual Report: Fiscal Year 2009-2011*; data for FY2012-FY2022 from SBA, *Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs Annual Report* for each fiscal year. Annual reports available at https://www.sbir.gov/impact/impact-reports.

Notes: The amount each federal agency is required to set aside from its extramural research and development (R&D) budget for the SBIR and STTR programs is mandated by 15 U.S.C. §638(f)(1) and 15 U.S.C. §638(n)(1)(B). The required set aside has varied over time. For example, the required set aside for the SBIR program was 2.5% in FY2010 and is 3.2% in FY2025. Similarly, the required set aside for the STTR program was 0.3% in FY2010 and is 0.45% in FY2025. The size of the SBIR and STTR programs is also dependent on the size of the extramural R&D budget of a federal agency, which is dependent on the amount that Congress appropriates in a given year. To calculate constant FY2024 dollars, CRS used the gross domestic product (chained) price index found in Table 10.1 in Office of Management and Budget, *FY2026 Budget of the U.S. Government: Historical Tables*, https://www.whitehouse.gov/omb/information-resources/budget/historical-tables/.

The SBIR and STTR programs consist of three phases that support the advancement of small-business-conducted R&D from conception to commercialization. **Figure 2** shows the purposes and parameters of each phase. Phase I awards fund feasibility-related R&D. Phase II awards fund the development of prototypes or other R&D that advances work initiated in Phase I that meets a particular agency program need or exhibits the potential for commercial application. Phase III is focused on commercialization of the results of Phase I and Phase II awards; the SBIR and STTR programs do not provide funding in Phase III.

Figure 2. Phases of the SBIR and STTR Programs



Source: Adapted from Government Accountability Office, *Small Business Research Programs: Information Regarding Subaward Use and Data Quality*, GAO-24-106399, November 28, 2023, p. 7, https://www.gao.gov/assets/d24106399.pdf.

Note: The dollar amounts included in the figure represent the size of an award a federal agency can make under each phase of the program without seeking a waiver from SBA. Federal agencies can make awards above the award size limit with SBA approval (15 U.S.C. §638(aa)(4)).

Issues for Congress

Congress has modified and extended the SBIR and STTR programs a number of times. On September 30, 2025, the authority for the programs, including the authority and funding for the pilot programs, expires. As Congress determines, what, if any, action to take toward the reauthorization of the programs, it may consider several policy issues, including the effectiveness of efforts to mitigate foreign influence and interference in the programs (i.e., research security concerns); program eligibility, in particular the role of small businesses that have received multiple awards under the programs; and the commercialization of SBIR- and STTR-derived technologies and services.

The following sections discuss selected policy issues and selected proposed legislation that would reauthorize and modify the SBIR and STTR programs. In particular, this report highlights provisions in S. 853 and H.R. 4777, the Investing in National Next-Generation Opportunities for Venture Acceleration and Technological Excellence (INNOVATE) Act, as well as S. 1573 and H.R. 3169, the SBIR/STTR Reauthorization Act of 2025.

Mitigation of Foreign Risks

Some Members of Congress are concerned about the security of the U.S. R&D enterprise from foreign ownership, control, or influence, including federally funded R&D performed by small businesses.[7] U.S. law enforcement and counterintelligence agencies have highlighted the efforts of foreign countries, including Russia, Iran, and the People's Republic of China, to acquire U.S.

[7] For example, see Rep. Tim Walberg, "CQ: Foreign Influence Concerns Loom Over Small-Business Programs," press release, May 15, 2025, https://walberg.house.gov/media/in-the-news/cq-foreign-influence-concerns-loom-over-small-business-programs.

research and technology through both licit and illicit means, including R&D considered important for economic competitiveness and national security.[8] Such means include the use of espionage, intellectual property theft, direct and indirect investment and financial subsidies, corporate acquisitions, forced technology transfer, and talent recruitment to gain access to U.S. R&D outputs.[9]

The SBIR and STTR Extension Act of 2022 (P.L. 117-183) required federal agencies to develop and implement a "due diligence program" to assess the potential security risks of a small business seeking an SBIR or STTR award.[10] Specifically, an agency's due diligence program is required to use a risk-based approach and must include (1) an assessment of a small business's cybersecurity practices; (2) an examination of the firm's patent activities (e.g., whether or not it has licensed technologies to an entity in a foreign country of concern); (3) an analysis of the firm's employees; and (4) an evaluation of a small business's foreign ownership, including any financial ties, obligations, and affiliations of the small business and its employees to a foreign country, foreign person, or foreign entity. To be eligible for participation in the SBIR or STTR program, a small business must be majority owned and controlled by U.S. citizens or permanent residents; however, minority foreign ownership is permissible.

In conjunction with the due diligence program, small businesses applying for an SBIR or STTR award are required to disclose

- "the identity of all owners and covered individuals of the small business ... who are a party to any foreign talent recruitment program of any foreign country of concern";[11]
- the existence of any joint venture or subsidiary of the small business ... that is based in, funded by, or has a foreign affiliation with any foreign country of concern";
- "any current or pending contractual or financial obligation or other agreement specific to a business arrangement, or joint venture-like arrangement with an enterprise owned by a foreign state or any foreign entity";
- "whether the small business concern is wholly owned in ... [a] foreign country of concern";
- "the percentage, if any, of venture capital or institutional investment by an entity that has a general partner or individual holding a leadership role in such entity who has a foreign affiliation with any foreign country of concern";

[8] See, for example, National Counterintelligence and Security Center, *Protecting Critical and Emerging U.S. Technologies from Foreign Threats,* October 2021, https://www.dni.gov/files/NCSC/documents/SafeguardingOurFuture/FINAL_NCSC_Emerging%20Technologies_Factsheet_10_22_2021.pdf.

[9] For example, see Department of Defense (DOD), "Survey of PRC State-Sponsored Technology Transfers Affecting SBIR Programs: A DoD Case Study," April 2021, https://cdn01.dailycaller.com/wp-content/uploads/2023/10/%E2%80%8Esbtc.orgwp-contentuploads202205PNSIBStudy-DODSBIR-China-Study-FINAL.pdf; and National Institutes of Health, "Case Studies," September 10, 2024, https://grants.nih.gov/policy-and-compliance/policy-topics/foreign-interference/case-studies.

[10] 15 U.S.C. §638(vv).

[11] A *covered individual* is someone who "contributes in a substantive, meaningful way to the scientific development or execution of a research and development project proposed to be carried out with a research and development award from a federal research agency; and ... is designated as a covered individual by the federal research agency concerned" (SBA *Policy Directive*, p. 153). *Foreign country of concern* refers to "the People's Republic of China, the Democratic People's Republic of Korea, the Russian Federation, the Islamic Republic of Iran, or any other country determined to be a country of concern by the Secretary of State" (SBA *Policy Directive,* p. 153).

- "any technology licensing or intellectual property sales to a foreign country of concern ... during the 5-year period preceding submission of the proposal";
- "any foreign business entity, offshore entity, or entity outside the United States related to the small business concern";[12] and
- whether "the applicant or awardee [has] an owner, officer, or covered individual that has a foreign affiliation with a research institution located in a foreign country of concern."[13]

Currently, P.L. 117-183 prohibits federal agencies from making an SBIR or STTR award when a small business's disclosed relationships and commitments present concerns about conflicts of interest or conflicts of commitment, violate current law and award terms and conditions, or pose a risk to national security. In addition, federal agencies are prohibited from making such awards when a small business has an owner or covered individual who is participating in a talent recruitment program associated with a foreign country of concern, has an affiliation with a research institution in a foreign country of concern, or has a business entity located in a foreign country of concern.

According to a 2024 report by the Government Accountability Office (GAO), agencies have sought to refine their due diligence programs, including through hiring additional staff, training staff, acquiring tools to aid in vetting applicants, and leveraging other resources or offices within the agency (e.g., counterintelligence offices) to support due diligence reviews.[14] GAO found that the most commonly identified risks are associated with the affiliations of small business employees and foreign ownership in small businesses by entities in countries of concern. GAO also found that DHS, EPA, and NASA did not have documented processes for requesting counterintelligence support and information sharing, including classified information, to support due diligence activities. According to GAO,

> Counterintelligence personnel can access classified information and perform analysis that could help program officials assess the potential risk posed by an applicant. In addition to the classified information, some counterintelligence offices incorporate open-source information into their analysis and may have access to analytical tools that may not be available in the SBIR/STTR program offices.[15]

GAO noted that documenting review processes and establishing written guidance for decisionmaking, including the use of counterintelligence analysis, will help to ensure a common understanding of roles and responsibilities. According to GAO, consistent procedures will also make certain that officials have the information needed to identify and mitigate risk in award decisions.[16]

At least one agency has taken steps to publicly document its due diligence review process and program. In 2024, DOD released a policy memorandum to provide guidance and establish common standards and procedures for the consistent implementation of DOD's due diligence

[12] Section 4(c) of P.L. 117-183.

[13] SBA, *Policy Directive*, p. 156.

[14] Government Accountability Office (GAO), *Small Business Research Programs: Agencies Identified Foreign Risks, but Some Due Diligence Programs Lack Clear Procedures*, GAO-25-107402, November 21, 2024, https://www.gao.gov/products/gao-25-107402.

[15] GAO, *Small Business Research Programs: Agencies Identified Foreign Risks, but Some Due Diligence Programs Lack Clear Procedures*, p. 21.

[16] GAO, *Small Business Research Programs: Agencies Identified Foreign Risks, but Some Due Diligence Programs Lack Clear Procedures*, pp. 23-24.

program across the department.[17] The memorandum included a "Common Risk Matrix," which detailed the factors that must be assessed and the level of risk associated with certain activities and behaviors. It is unclear whether additional agencies will develop similar risk assessment tools and implementation policies to guide agency decisionmaking.

Congress may consider legislative action to address the security of U.S. R&D performed by small businesses. For example, Congress may consider requiring all agencies to provide transparency into their due diligence review process, including the factors associated with the assignment of level of risk. Congress could require all federal agencies to publicly release a policy that details their due diligence review process. Alternatively, Congress could require federal agencies to adopt DOD's due diligence review process, or Congress may take no action and maintain the status quo.

Policymakers might also consider the extent to which agencies should or should not rely on a consistent concept of foreign risk. In its 2024 report, GAO indicated that federal agencies more often deny awards with identified risks rather than make an award and impose risk mitigation requirements (e.g., increased reporting or change in personnel). Specifically, GAO stated

> For example, Air Force officials told us that they typically deny awards and remove such applicants from consideration rather than mitigate risks, in part because implementing mitigation measures would involve a large investment of staff time. Air Force officials explained that personnel could be needed to oversee mitigation measures such as tracking reporting requirements, conducting site visits, performing audits, and, when appropriate, documenting non-compliance. These officials also told us that mitigation measures may not be effective, and, if they fail, it could compromise large amounts of protected information.[18]

Congress could direct SBA to harmonize and streamline risk assessment practices across agencies, including by developing standardized descriptions of various risk levels and associated mitigation measures. It could also require increased information sharing and the leveraging of vetting tools and resources. Such efforts could reduce administrative costs for federal agencies. In addition, Congress may consider being more explicit regarding the circumstances in which an agency should deny an SBIR or STTR award. Increased transparency in agency decisionmaking regarding risk, including the types of behaviors and activities that would likely result in a denial, could reduce administrative costs by discouraging small businesses with potentially problematic foreign affiliations from applying to the programs. Alternatively, Congress could maintain the current due diligence program requirements.

Another factor potentially impacting federal agency due diligence efforts is that small businesses applying for R&D awards under the SBIR and STTR programs are also subject to government-wide security provisions and requirements that have been established to address concerns regarding foreign influence and interference in the U.S. R&D enterprise more generally. For example, Section 223 of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (P.L. 116-283) requires the disclosure of the "source of all current and pending research support received by, or expected to be received by," certain individuals listed on an application for a federal R&D award. Congress might consider how any potential overlap and/or differences between government-wide research security policies and requirements and

[17] Memorandum from Kathleen Hicks, Deputy Secretary of Defense, DOD, to Senior Pentagon Leadership, Defense Agency, and DOD Field Activity Directors, "Defense Small Business Innovation Research and Small Business Technology Transfer Due Diligence Program," May 13, 2024, https://media.defense.gov/2024/May/23/2003471996/-1/-1/1/DUE_DILIGENCE_PROGRAM_OSD003584_24_RES.PDF.

[18] GAO, *Small Business Research Programs: Agencies Identified Foreign Risks, but Some Due Diligence Programs Lack Clear Procedures*, p. 13.

those specific to the SBIR and STTR programs might be mitigated or coordinated to limit the reporting burden of small businesses.[19]

Legislation introduced in the 119th Congress would seek to modify current requirements associated with addressing concerns over foreign interference and influence in the SBIR and STTR programs. For example, S. 853 and H.R. 4777, the INNOVATE Act, would amend the circumstances under which a federal agency is required to reject an SBIR or STTR application. In particular, the bill would require an agency to deny an award to a small business that has any one of the following:

- an owner or covered individual who is participating in a talent recruitment program associated with a foreign country of concern,
- an affiliation with a research institution in a foreign country of concern,
- a business entity located in a foreign country of concern,
- a "foreign risk"[20] that connects it to an entity included on any of several different entity lists,
- "a foreign risk with a primary source that is classified," or
- another foreign risk or national security concern not listed in statute or regulation that has been determined by the agency to warrant a denial.

S. 853 and H.R. 4777 would also add to the circumstances in which a federal agency would be required to claw back SBIR and STTR funds from a small business because of research security concerns. For example, the legislation would require repayment of an SBIR or STTR award if within five years of the award, the small business sells, leases, or provides intellectual property derived from the award to a foreign entity that is not a U.S. ally.

Multiple Award Recipients

In general, participation in the SBIR and STTR programs is limited to for-profit companies that are owned and controlled by U.S. citizens or permanent residents and have less than 500 employees. Some Members of Congress and other observers have expressed concern over small businesses that receive multiple SBIR and STTR awards. They suggest that such small businesses rely on SBIR and STTR programs as a continuing revenue source and that they have a poor track record of commercialization. They argue that the SBIR and STTR programs should be revised to limit the number of SBIR and STTR awards a company can receive.[21] Other Members of

[19] For more information on government-wide policies, see CRS Report R48541, *Federal Research Security Policies: Background and Issues for Congress*.

[20] Section 401 of S. 853 would define *foreign risk* to mean "in the past 10 years, any foreign affiliation, technology licensing agreement, joint venture, contractual or financial obligation (pending or otherwise), investment agreement, research relationship (including co-authorship), or business relationship between—(A) a small business concern (including all subsidiaries, spinouts, and affiliates) submitting a proposal for an SBIR or STTR program, and covered individuals, owners, or other key personnel of the small business concern; and (B) an individual, research institution, business entity, government, or government-owned entity in a foreign country of concern that is disclosed ... or otherwise identified in the due diligence process."

[21] U.S. Congress, Senate Committee on Small Business and Entrepreneurship, *Golden Age of Innovation: Reforming SBIR-STTR for the 21st Century*, hearings, 119th Cong., 1st sess., March 5, 2025, S.Hrg. 119-20, https://www.congress.gov/event/119th-congress/senate-event/LC74425/text; Testimony of Ms. Amanda Bresler in U.S. Congress, House Committee on Small Business, Subcommittee on Economic Growth, Tax, and Capital Access, *Exploring SBA Programs: Reviewing the SBIC and SBIR Programs' Impact on Small Businesses*, hearings, 118th Cong., 2nd sess., April 16, 2024, https://www.congress.gov/event/118th-congress/house-event/117064; Jason Miller, (continued...)

Congress, however, indicate that multiple award recipients are being selected through a competitive, merit-based process and that such companies are addressing federal agency needs. They suggest that placing a limit on the number of awards a company can receive would "place a limit on the best ideas."[22]

In 2022, Congress required increased performance standards (i.e., higher transition rates from Phase I to Phase II and from Phase II to commercialization) for small businesses receiving 50 or more awards over a 10-year period (P.L. 117-183). According to GAO, 22 small businesses received 50 or more Phase II awards from FY2011 through FY2020.[23] These small businesses represented less than 1% of the total awardees but received 10% of the Phase II funding awarded during this period. GAO determined that six businesses did not meet the new performance standards and would be ineligible for future awards. GAO found, however, that the standards generally "have minimal effects" on SBIR program participation and eligibility. This suggests that the existing policy is likely insufficient to address some Members' concerns over multiple award recipients. GAO also found that agencies varied in the extent to which they issued multiple awards to small businesses and that such variation was likely due to several factors, including the following:

- **The use of caps or limitations.** Some agencies implement caps on the number of proposals a small business can submit or on the number of awards a small business can receive. According to GAO, five agencies use proposal or award caps, and the three agencies with the highest number of multiple award recipients—DOD, DHS, and DOT—do not use caps.
- **The procurement of technologies to address mission needs.** DOD, DHS, and DOT—the agencies with the highest percentage of awards to multiple award recipients—are among the agencies with specific technological needs. Some of those technologies may have limited private markets.
- **The use of conventional solicitation topics.** Federal agencies with specific R&D and procurement needs generally use conventional topics to solicit SBIR and STTR proposals. Under a conventional topic, an agency defines a specific problem or mission need, and the small businesses propose solutions. In contrast, under an open topic, a small business identifies both the problem it seeks to address and the proposed solution.
- **A prioritization of new or diverse applicants.** According to GAO, HHS and NSF have issued the lowest percentage of their awards to multiple award

"The Fate of the SBIR Program Hangs in the Balance of the Next Month," *Federal News Network*, August 30, 2022, https://federalnewsnetwork.com/reporters-notebook-jason-miller/2022/08/the-fate-of-the-sbir-program-hangs-in-the-balance-of-the-next-month/; Gabriela Rodriguez, "Federal Aid for Small-Business R&D Is Getting Smarter, but Remains Too Easy to Game," Niskanen Center, December 13, 2022, https://www.niskanencenter.org/federal-aid-for-small-business-rd-is-getting-smarter-but-remains-too-easy-to-game/; and Joe Gould and Bryant Harris, "Paul to Oppose Small Business Program Pentagon Uses to Spur Innovation," *Defense News*, June 20, 2022, https://www.defensenews.com/congress/2022/06/20/paul-to-oppose-small-business-program-pentagon-uses-to-spur-innovation/.

[22] Statement of Sen. Edward Markey in U.S. Congress, Senate Committee on Small Business and Entrepreneurship, *Golden Age of Innovation: Reforming SBIR-STTR for the 21st Century*, hearings, 119th Cong., 1st sess., March 5, 2025, S.Hrg. 119-20, https://www.congress.gov/event/119th-congress/senate-event/LC74425/text.

[23] GAO, *Small Business Research Programs: Increased Performance Standards Likely Affect Few Businesses Receiving Multiple Awards*, GAO-24-106398, March 29, 2024, https://www.gao.gov/products/gao-24-106398.

> recipients, and both agencies have focused efforts to attract new and diverse applicants, including applicants from minority-serving institutions.[24]

According to a National Academies of Sciences, Engineering, and Medicine (NASEM) report, multiple award recipients "present conflicting evidence" regarding commercialization outcomes, and studies examining multiple award recipients may not assess the role of these firms in addressing the specific procurement needs of agencies. In particular, the NASEM stated

> Firms that win multiple awards may differ from one another in several important ways. For instance, a frequent winner that is struggling to commercialize due to the non-incremental nature of its technology is quite different from one that acquires frequent grants as part of its business model. Second, firms may establish long SBIR/STTR track records as part of a mutually symbiotic relationship with the funding agency, especially in cases in which SBIR/STTR winners are uniquely equipped to meet specific procurement needs. These firms develop deep relationships with their funders over years of SBIR/STTR activity within a single agency. This vertical accumulation of awards within a single agency may lead firms to help expand agency capacities well beyond what a typical SBIR/STTR awardee can accomplish. On the other hand, more horizontally oriented firms may be searching for awards across multiple agencies to match their own specific technologies or to take advantage of an established familiarity with the application process.[25]

Legislation introduced in the 119th Congress would seek to address concerns regarding multiple award recipients. For example, S. 853 and H.R. 4777 would impose a number of restrictions on program eligibility. Specifically, a small business that has previously received more than $75 million in funding under the SBIR and STTR programs would be ineligible to apply. The bills would also prohibit a small business with annual receipts over $40 million from applying for a Phase I award, prevent an individual from serving as the principal investigator on more than one SBIR or STTR proposal, limit the number of proposals a small business can submit to a single SBIR or STTR solicitation, and cap the total number of SBIR and STTR proposals a small business can submit to a single agency in a single fiscal year to 25.

S. 853 would also amend the increased performance standards for small businesses that have received multiple awards. For example, the legislation would require a small business that has received more than 25 Phase II awards over its lifetime to demonstrate that the sum of its annual receipts from non-SBIR or non-STTR sources exceeds the total amount of Phase I and Phase II funding it has received and that 65% of the sum of its annual receipts over "the 3 years preceding the most recent fiscal year" are from non-SBIR and non-STTR sources.

Alternatively, S. 1573 and H.R. 3169, the SBIR/STTR Reauthorization Act of 2025, would, if enacted, require SBA to develop an annual "commercialization impact assessment" for each small business that has received more than 50 Phase II awards over a nine-year period. The assessment would include the total value of federal awards, other than SBIR or STTR awards that the small business received; "the average annual gross revenue of the small business" in each of the previous nine fiscal years; and additional investments from non-SBIR or non-STTR sources, among other measures.

Depending on Congress's future goals for the programs, it may consider maintaining the status quo, repealing or modifying the increased performance standards, implementing a cap on the number of proposals or awards a small business can receive each year, establishing a cap on the

[24] GAO, *Small Business Research Programs: Increased Performance Standards Likely Affect Few Businesses Receiving Multiple Awards*, pp. 11-15.

[25] National Academies of Sciences, Engineering, and Medicine (NASEM), *Review of the SBIR and STTR Programs at the Department of Energy*, 2020, pp. 44-45, https://nap.nationalacademies.org/read/25674/chapter/4#44.

amount of funding a small business can receive under the programs to remain eligible, or increasing the use of open solicitations. Implementing policies that would limit the number of awards a small business could receive under the SBIR and STTR programs may diversify the applicant pool; however, it could also make it more difficult for small businesses that have developed an understanding of agencies' needs through the receipt of multiple awards to access an effective mechanism for addressing such needs (i.e., the SBIR and STTR programs).

Commercialization-Related Activities

A statutory goal of the SBIR and STTR programs is to foster the development and commercialization of new technologies. Success in achieving this goal can take different forms. For example, a technology could meet an agency need and be procured by that agency (e.g., a specialized component or material for a NASA spacecraft), a technology could fill a need in the commercial marketplace (e.g., a biological process for producing enzymes and specialty chemicals, including fragrances), or both.

Congress has enacted various pilot programs and provisions to advance the commercialization of technologies resulting from SBIR and STTR awards. For example, federal agencies are authorized to provide technical and business assistance funds to SBIR and STTR awardees to support, among other activities, intellectual property protections, market research, and the development of regulatory plans. In another example, in 2018, Congress required agencies to implement a commercialization assistance pilot program that allows them to use up to 5% of their SBIR funds to award eligible small businesses a third or subsequent Phase II award for the continuation of R&D supported under previous Phase II awards; additional Phase II awards often provide resources that enable technology maturation and increase the likelihood of commercial success.[26] According to a 2024 GAO report, only DOE has established the required pilot program so far, making seven awards between 2019 and 2024.[27] GAO found that NASA and HHS applied for exceptions from implementing the pilot program, which SBA granted. GAO also found that most agencies were unable to implement the pilot program because they do not make second Phase II awards, and therefore no small businesses were eligible for a pilot program award.

Some experts have cautioned against placing too much emphasis on commercialization for evaluating the success of the SBIR and STTR programs. These experts argue that commercialization is only one of the four overarching goals of the SBIR and STTR program, so too strong of a focus on this one goal might diminish the emphasis on the others.[28] A report by the NASEM underscored how the SBIR and STTR program goals of stimulating innovation, meeting federal research needs, increasing commercialization, and fostering diversity in innovation and entrepreneurship "appear to be in conflict":

> A well-known challenge of innovation processes, however, is the gap between research and commercialization. Individuals skilled at research tend to have much lower capability for translating their research into products and then commercializing them, and vice versa…. Many expressions of the program's goals emphasize commercialization, which could lead to a funding prioritization of projects that promise short-term commercialization potential over those with ... longer-term innovation potential…. Essentially the program

[26] 15 U.S.C. §638(uu).

[27] GAO, *Small Business Innovation Research: Most Agencies Did Not Implement Required Commercialization Pilot*, GAO-24-107155, September 25, 2024, https://www.gao.gov/products/gao-24-107155.

[28] See, for example, testimony of David H. Finifter, Professor of Economics, Emeritus, Research Professor of Public Policy, The College of William and Mary, in U.S. Congress, House Committee on Small Business, *Oversight of the Small Business Innovation Research and Small Business Technology Transfer Programs*, hearings, 113th Cong., 2nd sess., May 21, 2014.

> asks that agencies and awardees solve research problems, solve commercialization problems, and diversify participation at the same time as a means to address the overall societal mission of their agencies.[29]

Given federal agencies' wide range of missions—from general missions, such as advancing broad fields of science, to more specific missions, such as providing for the national defense—some experts have recommended that Congress continue to provide flexibility to agencies over the operation of their SBIR and STTR programs.[30] Other experts have suggested that agencies should reorient their SBIR and STTR programs "to focus more sharply on one of the program's objectives: commercializing innovations derived from federal R&D."[31] Congress may consider modifying the suite of commercialization-related authorities provided to federal agencies. It may also consider requiring SBA or a third party to evaluate the effectiveness of specific commercialization-related activities and programs to ensure federal resources are allocated to the most successful efforts. Alternatively, Congress may maintain the status quo.

Legislation introduced in the 119th Congress would make a number of changes to the SBIR and STTR programs' commercialization-related authorities. For example, S. 853 and H.R. 4777 would establish a new Strategic Breakthrough Awards program. The new program would authorize an additional Phase II award of up to $30 million to assist in the transition of an SBIR- or STTR-developed technology into the acquisition process. In addition, S. 853 and H.R. 4777 would terminate the commercialization assistance pilot program that requires federal agencies to award eligible small businesses a third Phase II award for the continuation of R&D that ensures progress toward commercialization.

There are other bills that would address the development and commercialization of new technologies under the SBIR and STTR programs. For instance, S. 1573 and H.R. 3169 would extend the authority for both the commercialization assistance pilot program and DOD's Commercialization Readiness Program. In addition, S. 1573 and H.R. 3169, would require each federal agency to designate an existing official as the technology commercialization official. The technology commercialization official would be tasked with providing guidance to recipients of SBIR or STTR awards on commercializing and transitioning technologies and with coordinating with SBA and the technology commercialization officials of other federal agencies to identify additional markets and commercialization pathways for promising SBIR and STTR program technologies, among other duties. The legislation would also require DOD to (1) establish training activities for contracting officers to ensure that such individuals are fully aware of all aspects of Phase III acquisitions under the SBIR and STTR programs, (2) direct procurement center representatives to advocate for the use of Phase III awards, and (3) require federal agencies and prime contractors to report to SBA on the actions taken to develop simplified and standardized procedures and model contracts for Phase I, Phase II, and Phase III SBIR awards. Similarly, H.R. 3851, the SBIR/STTR Pilot Extension Act, would extend the authority for both the commercialization assistance pilot program and DOD's Commercialization Readiness Program, among other provisions.

[29] NASEM, *Review of the SBIR and STTR Programs at the Department of Energy*, 2020, pp. 19-20, https://nap.nationalacademies.org/read/25674/chapter/3#19.

[30] Finifter testimony, House Committee on Small Business hearings.

[31] Robert Rozansky, *Becoming America's Seed Fund: Why NSF's SBIR Program Should Be a Model for the Rest of Government*, Information Technology and Innovation Foundation, September 26, 2019, p. 2, https://www2.itif.org/2019-nsf-sbir-program.pdf.

Other Issues

Members of Congress have raised other issues that may be considered as Congress debates reauthorization of the SBIR and STTR programs, including the length of the reauthorization, the size of the programs, and outreach and assistance to rural or minority small business owners, among others. For example, S. 1573 and H.R. 3169 would make the authority for the SBIR and STTR programs permanent, and it would increase the size of the required set-aside for both programs. Conversely, S. 853 and H.R. 4777 would extend the programs until September 30, 2028, and while the bills would shift resources under the programs, they would not increase the overall size of the required set-asides. Funding for the SBIR and STTR programs is dependent on the size of a federal agency's extramural R&D budget, and therefore decreases or increases in the federal agency's overall R&D funding will have an impact on the amount of funding available under an agency's SBIR or STTR program and could impact whether or not an agency is required to participate in the SBIR or STTR programs. For example, the Trump Administration is proposing to cut NSF's FY2026 Research and Related Activities—its main research account—by more than 60% compared to the FY2025 enacted level, which if enacted would likely result in a similar magnitude cut for NSF's SBIR and STTR programs.[32]

There are other bills pertaining to the SBIR and STTR programs. For instance, H.R. 1590, the Rural Innovation and Small Business Support Act, would require federal agencies with SBIR and STTR programs to enhance their outreach efforts to increase the participation of small businesses located in rural communities. Similarly, H.R. 4520, the SBIR/STTR Application Assistance Act, would authorize federal agencies to provide application assistance to small businesses from states or groups that have been historically underrepresented in the programs. H.R. 4520 would also extend the authority for the Federal and State Technology (FAST) Partnership Program until September 30, 2030. The FAST Partnership Program "provides funding to organizations to execute state/regional programs that increase the number of SBIR/STTR proposals leading to an increase in the number of SBIR/STTR awards from small businesses owners in undercapitalized regions."[33]

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[32] NSF, *FY 2026 Budget Request to Congress*, May 30, 2025, https://nsf-gov-resources.nsf.gov/files/00-NSF-FY26-CJ-Entire-Rollup.pdf?VersionId=GBeE5YPXWyPwtuB7WdVZjCSw3mrvAypu.

[33] SBA, "FAST," https://www.sbir.gov/community/fast.

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