

United States Government Required Supplementary Stewardship Information (Unaudited) for the Years Ended September 30, 2018, and 2017

Stewardship Investments

Stewardship investments focus on government programs aimed at providing long-term benefits by improving the nation's productivity and enhancing economic growth. These investments can be provided through direct federal spending or grants to state and local governments for certain education and training programs, R&D, and federally financed but not federally owned property, such as bridges and roads. When incurred, these investments are included as expenses in determining the net cost of operations. Stewardship investments for the current year and for the immediately preceding four years are shown in the table below.

Stewardship Investments for the Years Ended September 30, 2014, through 2018					
(In billions of dollars)	2018	2017	2016	2015	2014
Investments in non-federal physical property...	66.3	65.0	65.1	64.8	65.6
Investments in human capital	107.7	111.6	131.1	97.8	108.5
Research and development:					
Investments in basic research.....	40.1	36.5	35.5	29.4	34.0
Investments in applied research.....	38.2	32.7	32.5	28.8	28.1
Investments in development	75.0	68.2	64.9	63.3	61.8
Total investments	<u>327.3</u>	<u>314.0</u>	<u>329.1</u>	<u>284.1</u>	<u>298.0</u>

Non-Federal Physical Property

The government makes grants and provides funds for the purchase, construction, and/or major renovation of state and local government physical properties. Costs for non-federal physical property programs are included as expenses in the Statements of Net Cost and are reported as investments in the table. They are measured on the same accrual basis of accounting used in the *Financial Report*. DOT, HUD, EPA, and DOD had \$57.9 billion (87.3 percent), \$3.4 billion (5.1 percent), \$2.9 billion (4.4 percent), and \$1.2 billion (1.8 percent), respectively, of the total non-federal physical property investments in fiscal year 2018. Within DOT, the FHWA invested \$42.8 billion during fiscal year 2018, primarily via reimbursement from the Highway Trust Fund, for states' construction costs on projects related to the federal highway system. The main programs in which the states participate are the National Highway System, Interstate Systems, Surface Transportation, and Congestion Mitigation/Air Quality Improvement programs. The states' contribution is 10 percent for the Interstate System and 20 percent for most other programs.

Human Capital

The government runs several programs that invest in human capital. Those investments go toward increasing and maintaining a healthy economy by educating and training the general public. Costs do not include training expenses for federal workers.

Education, VA, DOL, and HHS had \$78.4 billion (72.8 percent), \$17.0 billion (15.8 percent), \$6.1 billion (5.7 percent), and \$2.1 billion (1.9 percent), respectively, of the total human capital investments in fiscal year 2018. Historically, the changes in Education's annual human capital investments have been primarily attributable to fluctuations in the loan program subsidy estimate and loan modification costs.

Education administers a wide variety of programs related to general public education and training programs that are intended to increase or maintain national economic productive capacity. The Office of Federal Student Aid administers need-based financial assistance programs for students pursuing postsecondary education and makes available federal grants, direct loans, and work-study funding to eligible undergraduate and graduate students.

The significant human capital programs administered by VA include veterans rehabilitation and employment programs which are provided to service disabled veterans; they are designated to improve employability and promote independence for the disabled. They also include education and training programs intended to provide higher education to dependents that might not be able to participate otherwise.

The significant human capital programs administered by DOL relate to grants for job training and employment programs. Investments in human capital administered by HHS primarily relate to National Institutes of Health (NIH) research training and career development programs and Health Resources and Services Administration Health Workforce programs.

Research and Development

Federal investments in R&D comprise those expenses for basic research, applied research, and development that are intended to increase or maintain national economic productive capacity or yield other future benefits.

- Investments in basic research are for systematic studies to gain knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications toward processes or products in mind.
- Investments in applied research are for systematic studies to gain knowledge or understanding necessary for determining the means by which a recognized and specific need may be met.
- Investments in development are the systematic use of the knowledge and understanding gained from research for the production of useful materials, devices, systems, or methods, including the design and development of prototypes and processes.

With regard to basic research, HHS, NASA, DOE, and DOD had \$18.7 billion (46.6 percent), \$5.5 billion (13.6 percent), \$5.1 billion (12.7 percent), and \$2.3 billion (5.8 percent), respectively, of the total basic research investments in fiscal year 2018. Further, HHS, DOD, DOE, and NASA had \$17.5 billion (45.8 percent), \$6.4 billion (16.7 percent), \$5.9 billion (15.4 percent), and \$2.5 billion (6.5 percent), respectively, of the total applied research investments in fiscal year 2018. The DOD and NASA had \$67.0 billion (89.3 percent) and \$4.5 billion (6.0 percent), respectively, of total development investments in fiscal year 2018.

Within HHS, NIH-supported research focuses on spurring advances in discovery along the biomedical research continuum, spanning basic, translational, and clinical research. NIH researchers undertake a wide array of research activities in pursuit of the NIH mission, including studying biology in health and disease states, undertaking observational and population-based research approaches, assessing new treatments or comparing different treatment approaches to provide new options for patients, and supporting a variety of health services research activities to inform medical practice. NIH regards the expeditious transfer of the results of its medical research for further development and commercialization of products an immediate benefit to improved health and an important mandate.

NASA R&D programs include activities to extend the knowledge of Earth, its space environment, and the universe, and to invest in new aeronautics and advanced space transportation technologies that support the development and application of technologies critical to the economic, scientific, and technical competitiveness of the U.S.

DOE R&D programs facilitate the creation, advancement, and deployment of new technologies and support the Department's mission to ensure America's security and prosperity by addressing its energy, environmental, and nuclear challenges through transformative science and technology solutions.

Major outputs of DOD R&D are scientific studies, investigations, research papers, hardware components, software codes, or limited construction of a weapon system component, to include non-system-specific development efforts. Development takes what has been discovered or learned from basic research and uses it to establish technological feasibility, assessment of operability, and production capability. Development is comprised of five stages: 1) advanced technology development, 2) advanced component development and prototypes, 3) system development and demonstration, 4) research, development, test and evaluation management support, and 5) operational systems development.