

NSF's Congressional Players

House

Authorization

Committee on Science, Space & Technology

Subcommittee on Research and Science Education

Appropriations

Subcommittee on Commerce, Justice, Science, and Related Agencies

Senate

Authorization

Health, Education, Labor and Pensions

Commerce, Science and Transportation Comm.

Subcommittee on Science and Space

Appropriations

Subcommittee on Commerce, Justice, Science, and Related Agencies

Authorization versus Appropriation Committees

Role of authorization committees

- Authorize funding
- Develop legislation to set program priorities, and to establish, continue, modify, or alter programs and program operations
- Oversight functions

Role of appropriation committees

- Hold “power of the purse”
- Set specific expenditures of money by U.S. government, e.g., allocates funds to numerous government agencies, departments, and organizations
- Disperse spending allocations to Appropriations Subcommittees
- Responsible for supplemental spending bills

**NATIONAL SCIENCE FOUNDATION
FY 2012 House CJS Mark
BY ACCOUNT**

(Dollars in Millions)

	FY 2011 Enacted	FY 2012 Request	House Mark FY 2012	FY12 House Mark vs FY12 Request		FY12 House Mark vs FY11 Enacted	
				Amount	Percent	Amount	Percent
R&RA	\$5,563.870	\$6,253.54	\$5,606.96	-\$646.58	-10.3%	\$43.09	0.8%
EHR	\$861.034	\$911.20	\$835.00	-76.20	-8.4%	-26.03	-3.0%
MREFC	\$117.060	\$224.68	\$100.00	-124.68	-55.5%	-17.06	-14.6%
AOAM	\$299.400	\$357.74	\$299.40	-58.34	-16.3%	0.00	0.0%
OIG	\$13.972	\$15.00	\$13.97	-1.03	-6.9%	0.00	0.0%
NSB	\$4.531	\$4.84	\$4.53	-0.31	-6.4%	0.00	0.0%
TOTAL, NSF	\$6,859.870	\$7,767.00	\$6,859.87	-\$907.13	-11.7%	-0.00	-0.00

Totals may not add due to rounding.

**NATIONAL SCIENCE FOUNDATION
FY 2012 Senate CJS Mark
BY ACCOUNT**

(Dollars in Millions)

	FY 2011 Enacted	FY 2012 Request	Senate Mark FY 2012	FY12 Sen. Mark vs FY12 Request		FY12 Sen. Mark vs FY11 Enacted	
				Amount	Percent	Amount	Percent
R&RA	\$5,563.870	\$6,253.54	\$5,443.00	-\$810.54	-13.0%	\$120.87	-2.2%
EHR	\$861.034	\$911.20	\$829.00	-82.20	-9.0%	-32.03	-3.7%
MREFC	\$117.060	\$224.68	\$117.06	-107.63	-47.9%	0.00	0.0%
AOAM	\$299.400	\$357.74	\$290.40	-67.34	-18.8%	-9.00	-3.0%
OIG	\$13.972	\$15.00	\$14.20	-0.80	-5.3%	0.23	1.6%
NSB	\$4.531	\$4.84	\$4.40	-0.44	-9.1%	-0.13	-2.9%
TOTAL, NSF	\$6,859.870	\$7,767.00	\$6,698.10	-\$1,068.91	-13.8%	-161.78	-2.4%

Totals may not add due to rounding.

NATIONAL SCIENCE FOUNDATION
FY 2012 House vs Senate CJS Mark
BY ACCOUNT

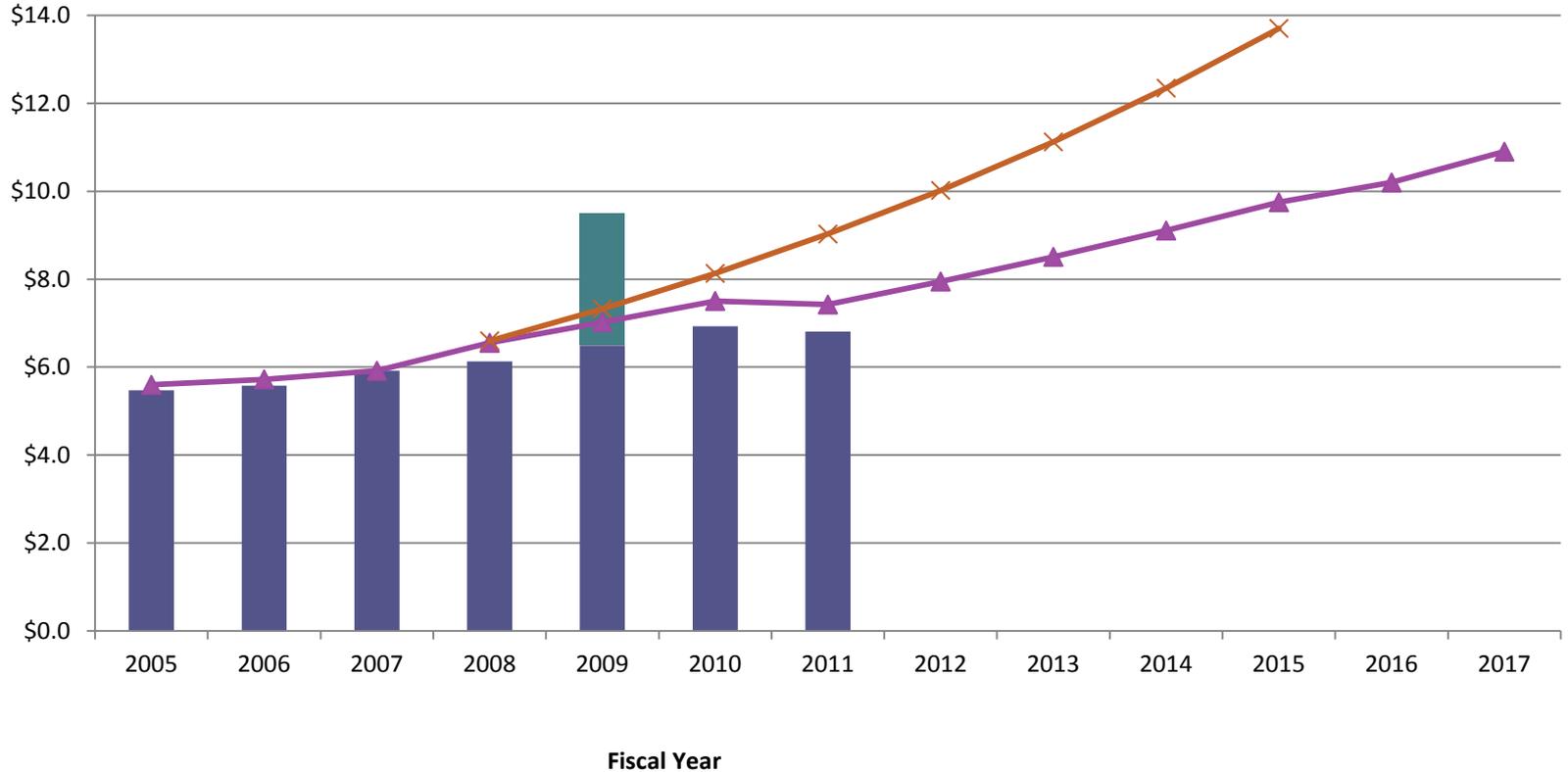
(Dollars in Millions)

	FY 2011 Enacted	FY 2012 Request	House Mark FY 2012	Senate Mark FY 2012	House vs Senate
					Amount
R&RA	\$5,563.870	\$6,253.54	\$5,606.96	\$5,443.00	-\$163.96
EHR	\$861.034	\$911.20	\$835.00	\$829.00	-6.00
MREFC	\$117.060	\$224.68	\$100.00	\$117.06	17.06
AOAM	\$299.400	\$357.74	\$299.40	\$290.40	-9.00
OIG	\$13.972	\$15.00	\$13.97	\$14.20	0.23
NSB	\$4.531	\$4.84	\$4.53	\$4.40	-0.13
TOTAL, NSF	\$6,859.870	\$7,767.00	\$6,859.87	\$6,698.10	-\$161.77

Totals may not add due to rounding.

Recent and Outyear NSF Funding

\$ in Billions



NSF Appropriations

ARRA Appropriations

President's Plan for Science & Innovation

America COMPETES Act

National Science Foundation FY12 Budget Funding Highlights

- Provides \$7.8 B for the NSF. Investments are made in areas that contribute to the President's Plan for Science and Innovation. Savings are also created by reducing funding for low-performing and lower-priority education and research programs.
- Demonstrates the Administration's commitment to R&D as a driver of economic growth, consistent with the President's plan to double funding for key basic research agencies.
- Fosters the development of a clean energy economy by providing \$998 million for a cross-agency sustainability research effort focused on renewable energy technologies and complex environmental- and climate-system processes.
- Supports job creation in advanced manufacturing and emerging technologies with significant increases for multidisciplinary research targeted at next-generation computer chips, wireless communications, and robotics technologies.

National Science Foundation FY12 Budget Funding Highlights, cont.

- Invests in the growth of America's science and technology workforce with \$20 million for recruiting and retaining undergraduate students from under-represented groups.
- Invests in the next generation of math and science teachers with a new \$20 million research and development program aimed at improving the preparation and professional development of future educators in these fields.
- Builds first-of-a-kind distributed research facilities to continuously monitor the Nation's environment and oceans.

Obama Administration FY 2012 Priorities

- Growing the economy and spurring job creation by America's businesses, is the top priority.
- 5-year freeze on all discretionary spending outside of security, but not across the board.
- “...we-as a Nation-must devote our resources to these fundamental areas of scientific inquiry.”
 - Increasing investment in R&D that contributes to fields as varied as biomedicine, cyber-security, nano-technology, and advanced manufacturing.
 - Significant investment in clean energy technology, boosting investment by 1/3rd
- Historic investment in repairing, rebuilding, and modernizing our transportation infrastructure.
- Ambitious effort to speed development of a cutting-edge, high-speed wireless data network.
- Double U.S. exports by 2014.

U.S. BUDGET IS

\$3,729,000,000,000

Federal Budget Growth

- 1789-1987 (198 Years) 1st Trillion
- 1987-2002 (15 Years) 2nd Trillion
- 2002-2007 (5 Years) 3rd Trillion

FEDERAL R&D

\$ 147,911,000,000 3.97%

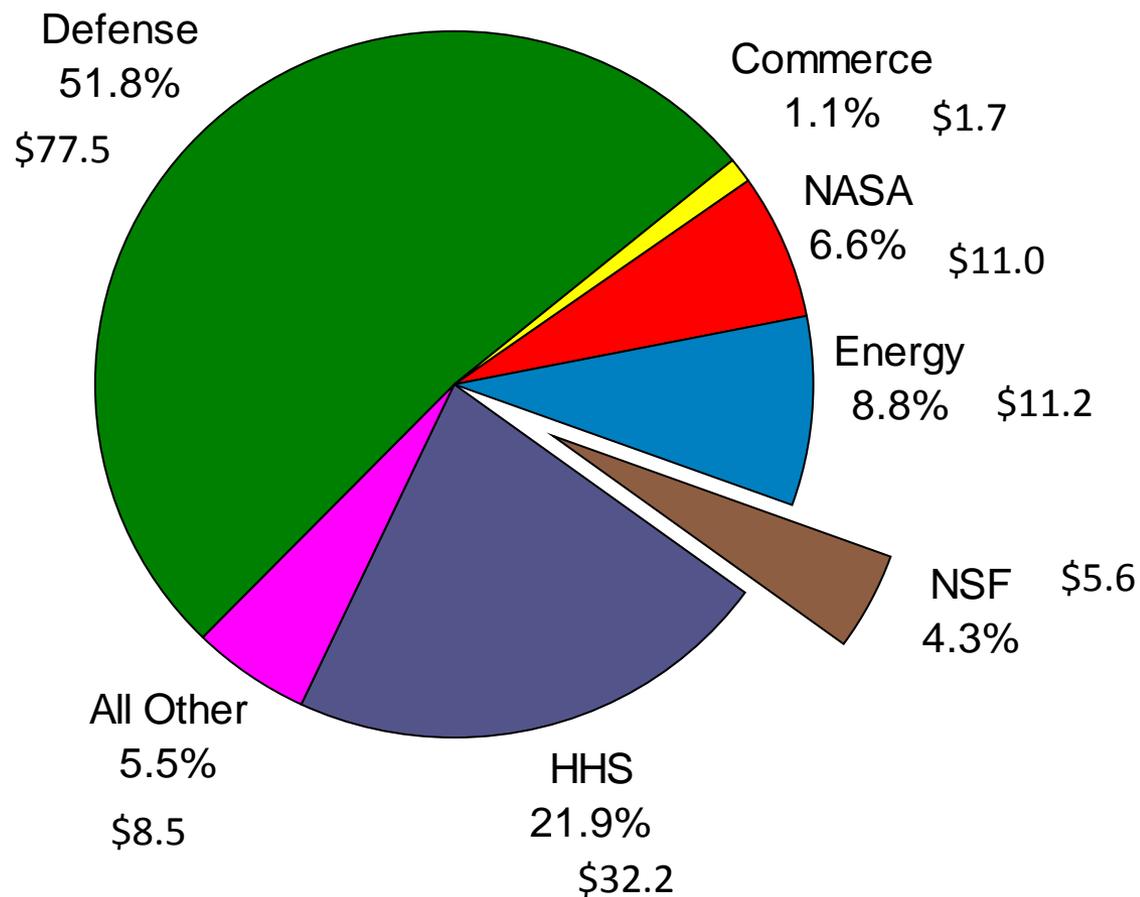
NSF RESEARCH BUDGET

\$ 6,320,000,000 4.3%

FEDERAL GOVERNMENT

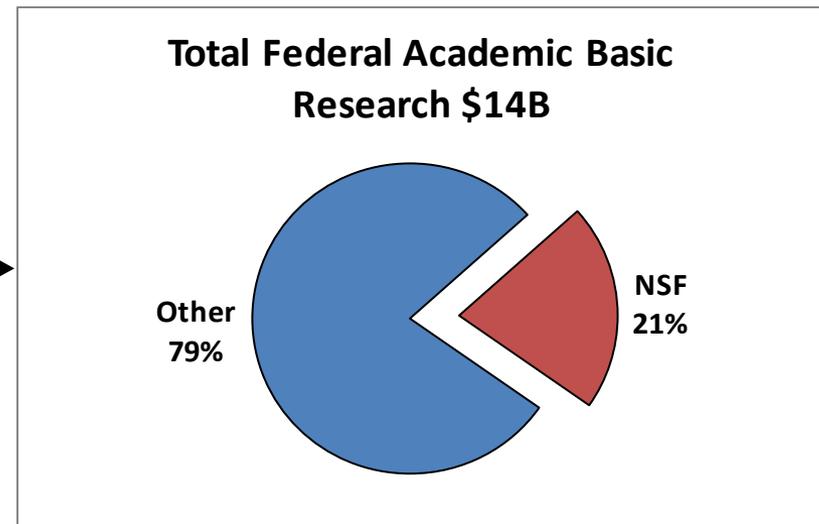
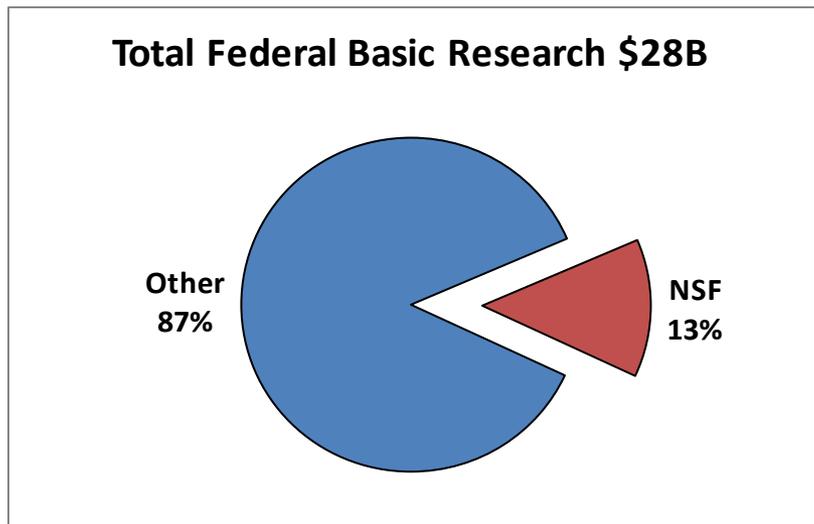
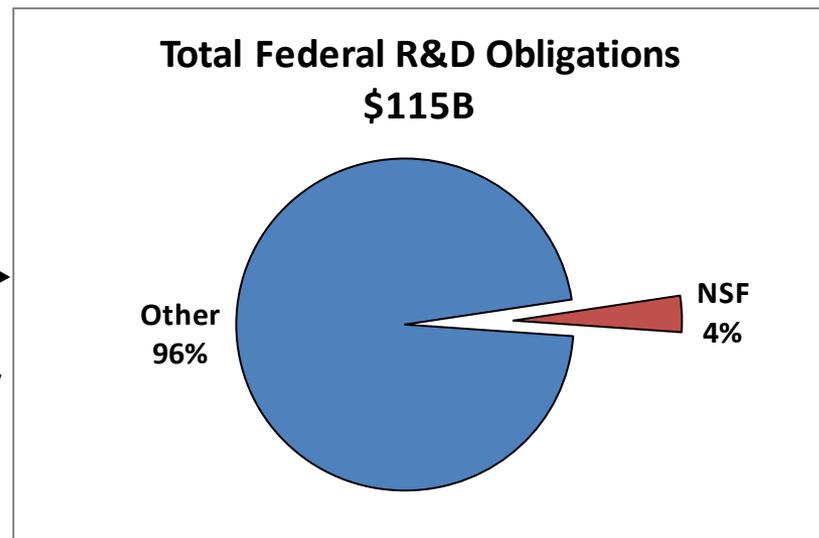
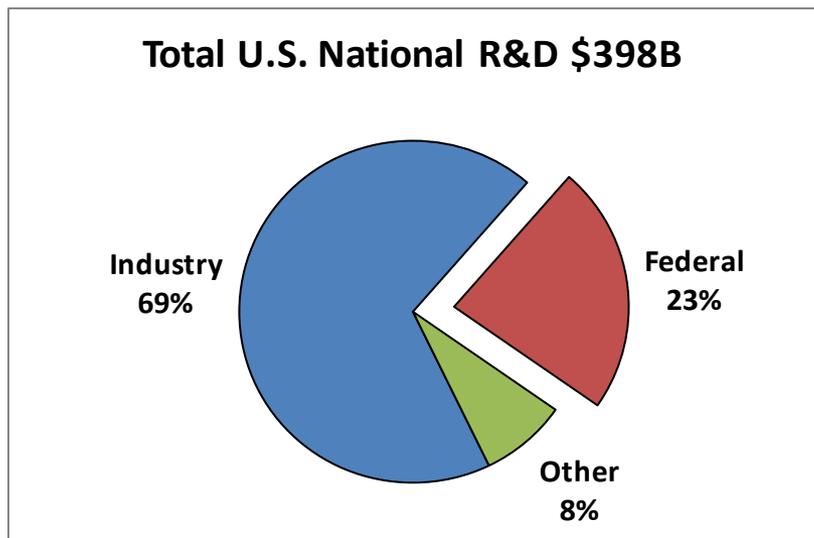
2012 R&D Budget

(\$147.9 Billion)



NSF Role in Research and Development

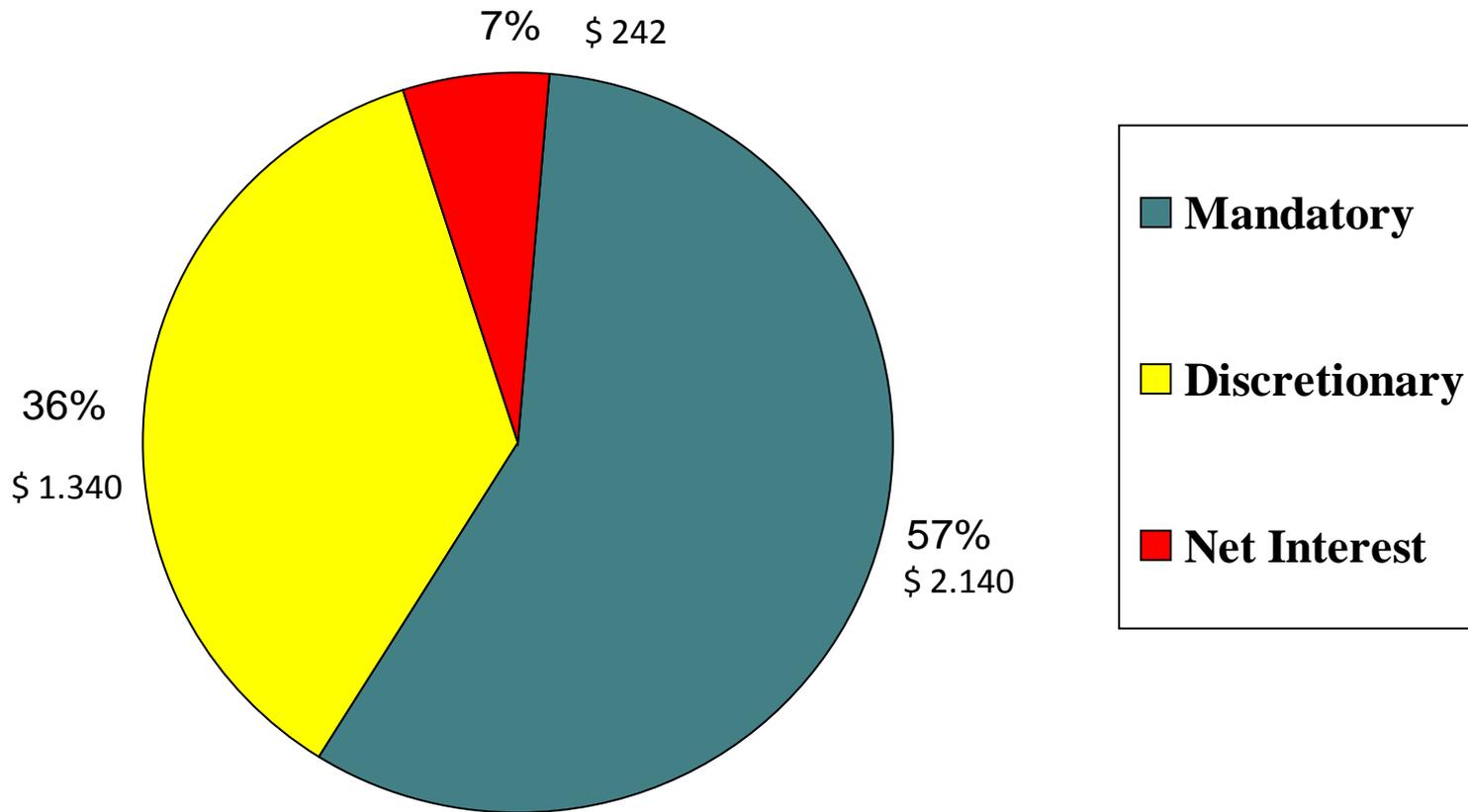
Fiscal Year 2008



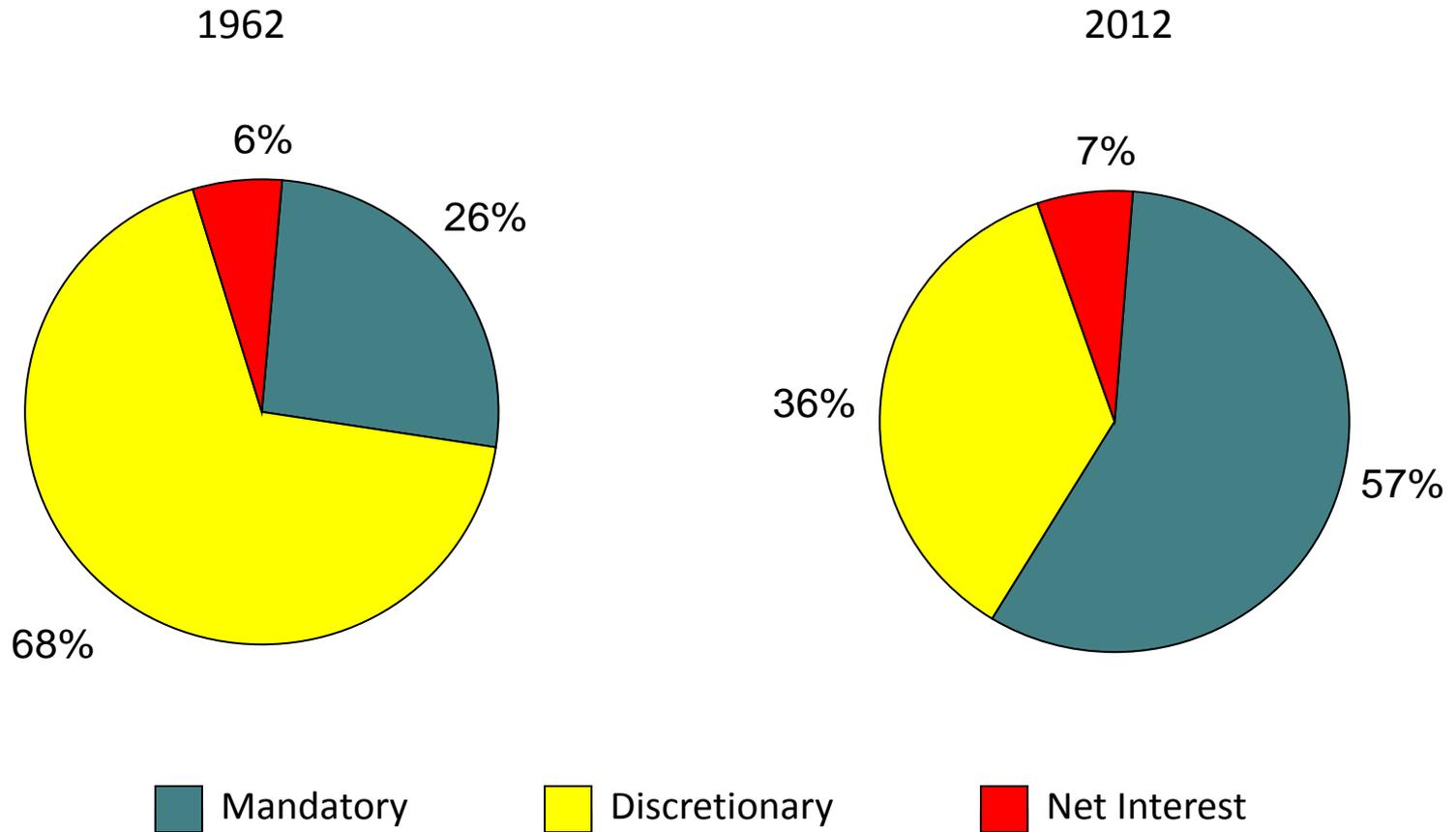
Latest complete data currently available.

FEDERAL GOVERNMENT

2012 Proposed Outlays
(\$3.729 Trillion)

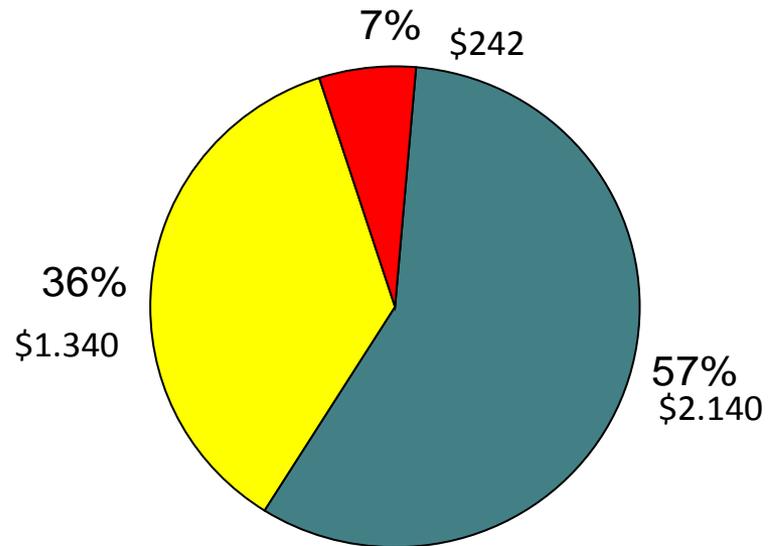


Mandatory Spending is Overwhelming the Rest of the Budget

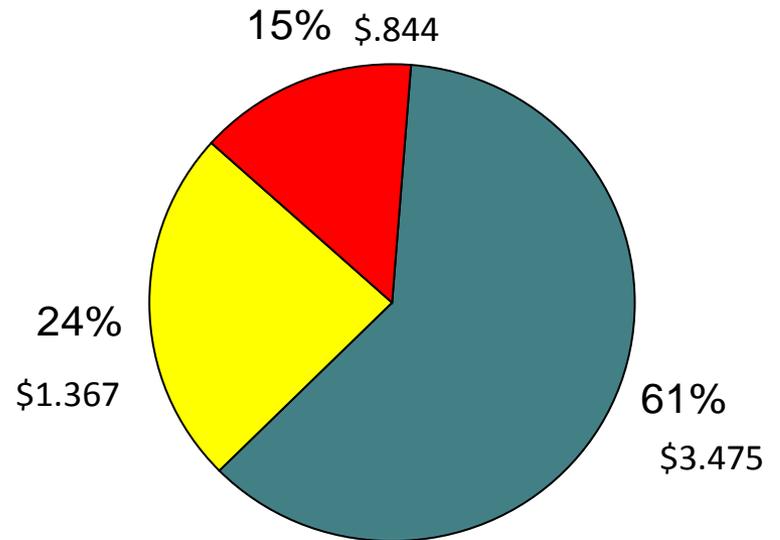


FEDERAL GOVERNMENT Proposed Outlays

2012 Proposed Outlays
(\$3.729 Trillion)



2021 Proposed Outlays
(\$5.697 Trillion)



Mandatory

Discretionary

Net Interest

Mandatory Spending

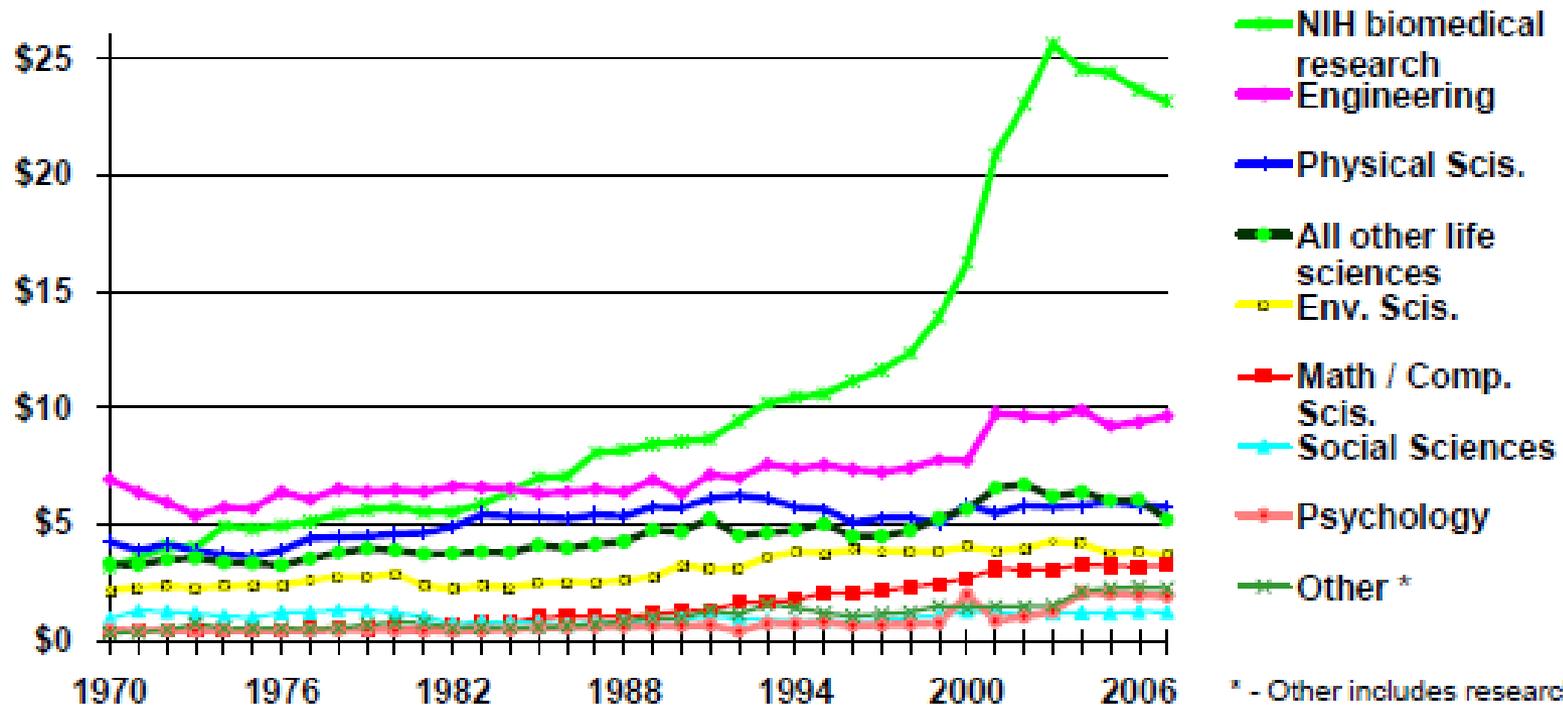
- Not in the jurisdiction of Appropriations Committees
- Many programs are increased for Cost of Living Adjustments
- Major Three - Social Security, Medicare, and Medicaid

Federal Support for research

- In inflation-adjusted dollars, federal funding for the physical sciences has been flat for several decades
- This comes at a time when other nations are increasing their public investments in R&D
- The America Competes Act will hopefully represent a reversal of this trend.

Trends in Federal Research by Discipline, FY 1970-2007

obligations in billions of constant FY 2008 dollars



Life sciences - split into NIH support for biomedical research and all other agencies' support for life sciences.

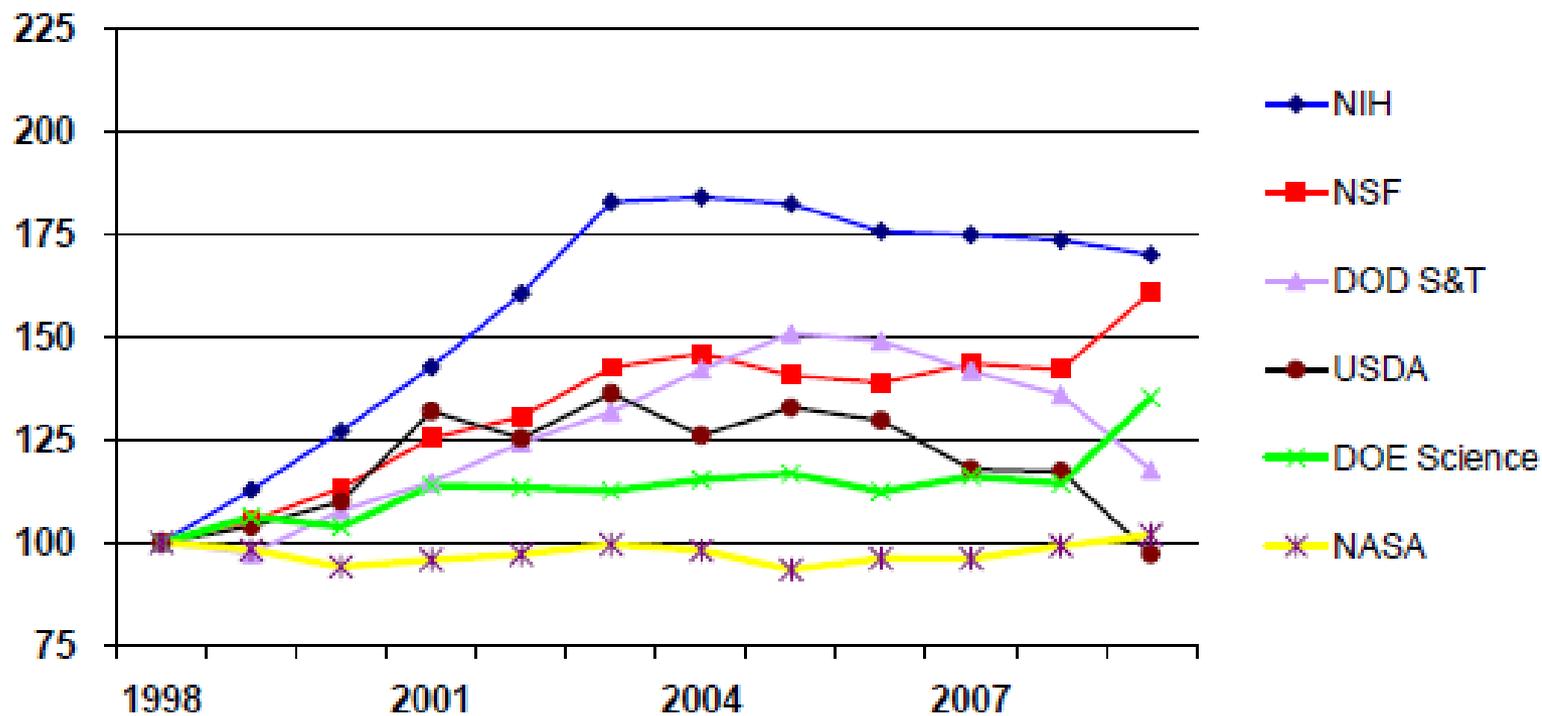
Source: National Science Foundation, *Federal Funds for Research and Development* FY 2005, 2006, 2007, 2008. FY 2008 and 2007 data are preliminary. Constant-dollar conversions based on OMB's GDP deflators. FEB. '08 © 2008 AAAS

* - Other includes research not classified (includes basic research and applied research; excludes development and R&D facilities)



Trends in Federal R&D, FY 1998-2009 *

selected agencies in constant dollars, FY 1998=100



Source: AAAS analyses of R&D in AAAS Reports VIII- XXXIII

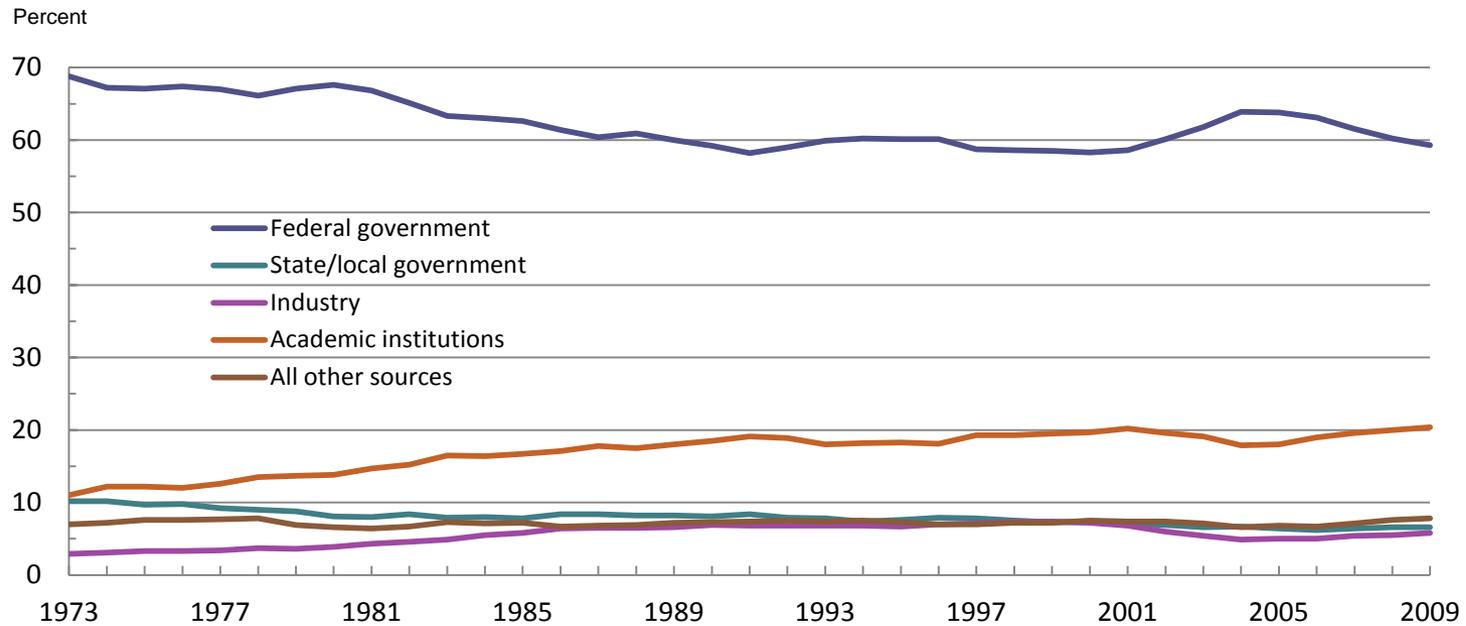
* FY 2009 figures are latest AAAS estimates of FY 2009 request.

R&D includes conduct of R&D and R&D facilities.

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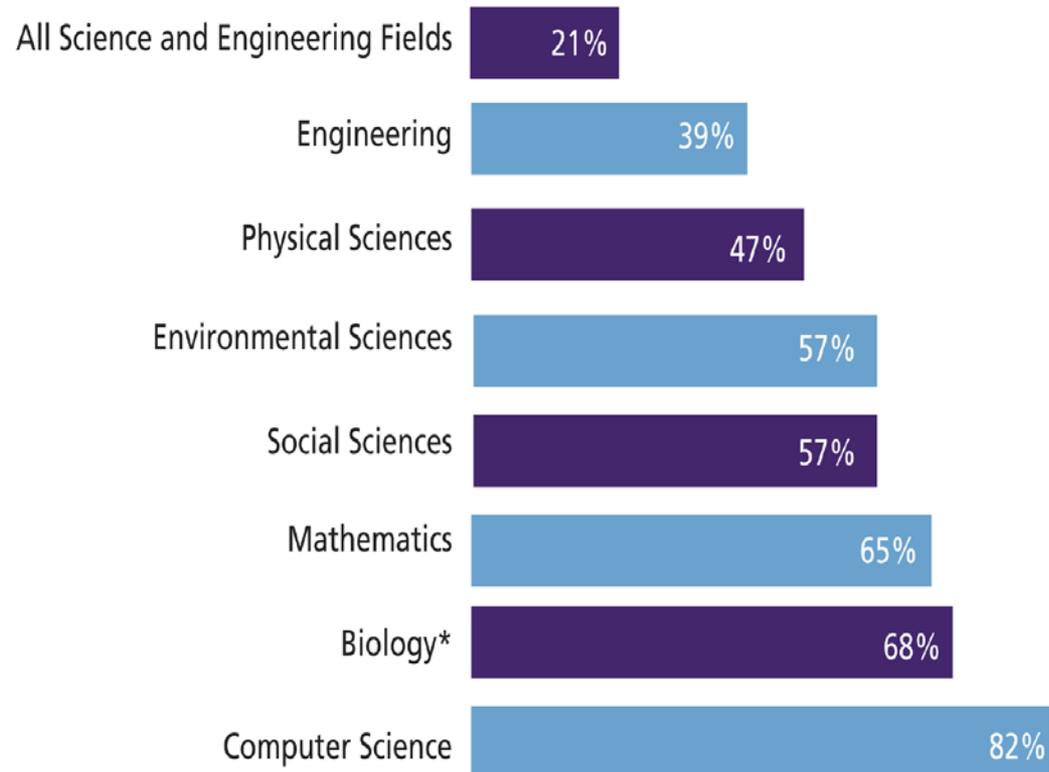
Academic R&D expenditures, by source of funding: 1973-2009



NOTE: Science and engineering R&D; non-S&E R&D not included.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Survey of Research and Development Expenditures at Universities and Colleges: FY 2009. See appendix table 5-2.

NSF SUPPORT OF ACADEMIC BASIC RESEARCH IN SELECTED FIELDS (as a percentage of total federal support)



*Excludes the National Institutes of Health.

Source: NSF Survey of Federal Funds for Research and Development.

Innovation Resulting from US Federally-Funded Research

Innovation	Funder
The Internet	DARPA/NSF
Web Browser	NSF
Bar Codes	NSF
Fiber Optics	NSF
Routers	NSF
MRI	NIH/NSF
Doppler Radar	NSF
Speech Recognition	NSF/DARPA
Nanotechnology	NSF
Computer Aided Design	NSF/DARPA
Google	NSF