



**A Presentation on the Federal Budget
for AAU**

July 15, 2008

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See our AAAS R&D Web site at

www.aaas.org/spp/rd

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**The Federal Budget:
Where Does the Money Go? And Why Should You Care?**

1. It's a LOT of money, and it used to be yours

- The federal government spends \$3.1 trillion a year, a fifth of the U.S. economy
- More than 80 percent of the money comes directly from YOU: income taxes and payroll taxes

2. You can't do POLICY in Washington without MONEY

- Money makes policies possible; without money, policies can't be implemented
- In these times of budget deficits, every policy decision has to be considered in the context of its effect on the budget

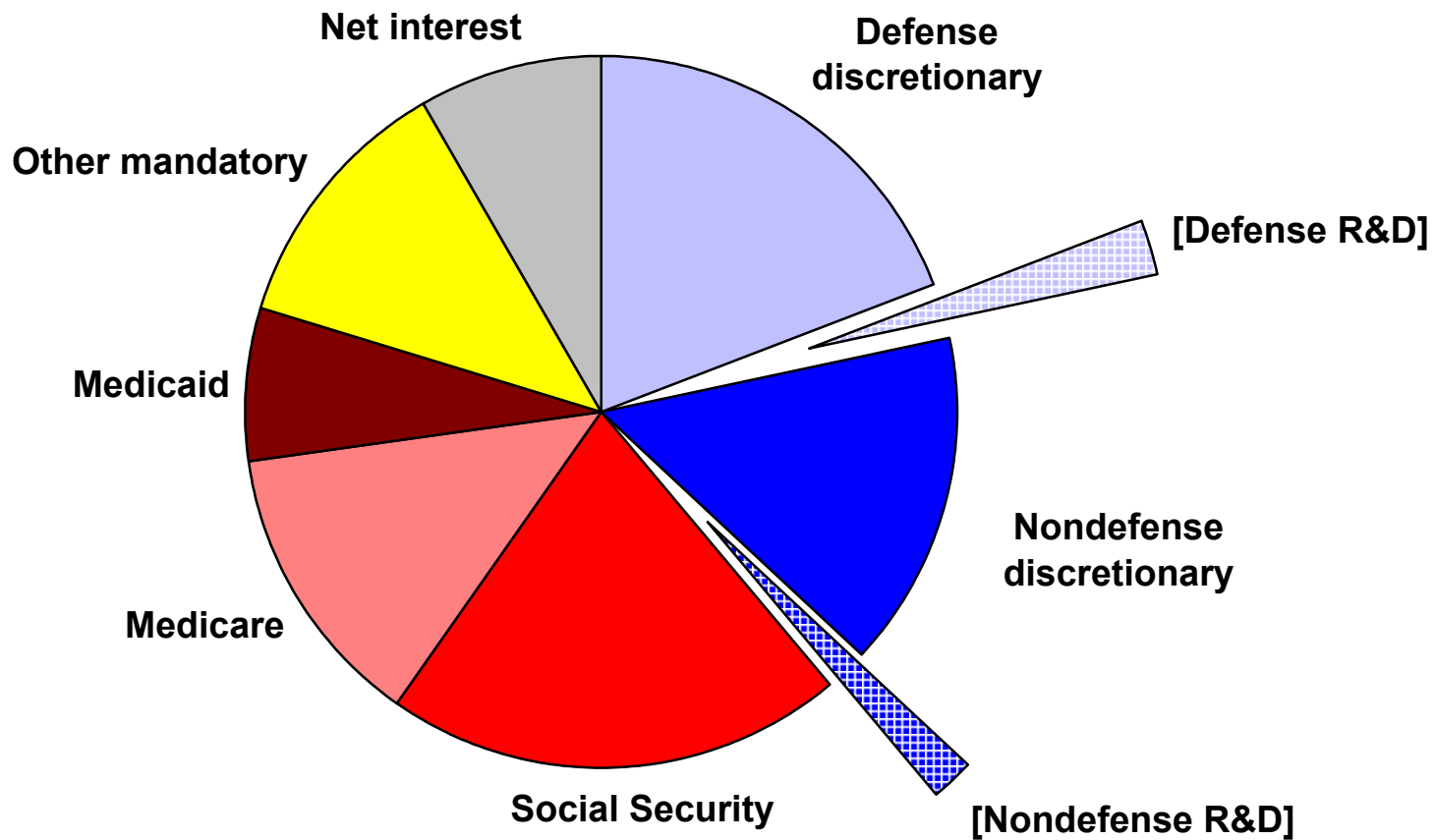
3. The budget takes up a lot of time and effort on Capitol Hill and the executive branch

- Agencies and Congress spend an extraordinary amount of time every year on the budget
- The budget has an annual cycle that affects nearly every decision in Washington; for the rest of this year, the budget may be the only thing that actually gets done

4. The federal budget determines the health of U.S. science and engineering research and education

- The federal government spends more than \$140 billion a year on R&D
- The federal government funds 60 percent of all university R&D, and also supports fellowships, scholarships, student loans, and other aid
- R&D funding decisions are part of the budget process; this is where priorities are set for the federal investment

Composition of the Proposed FY 2009 Budget Total Outlays = \$3.1 trillion



Note: Projected Unified deficit is \$407 billion.

Figures exclude most Iraq and Afghanistan military costs.

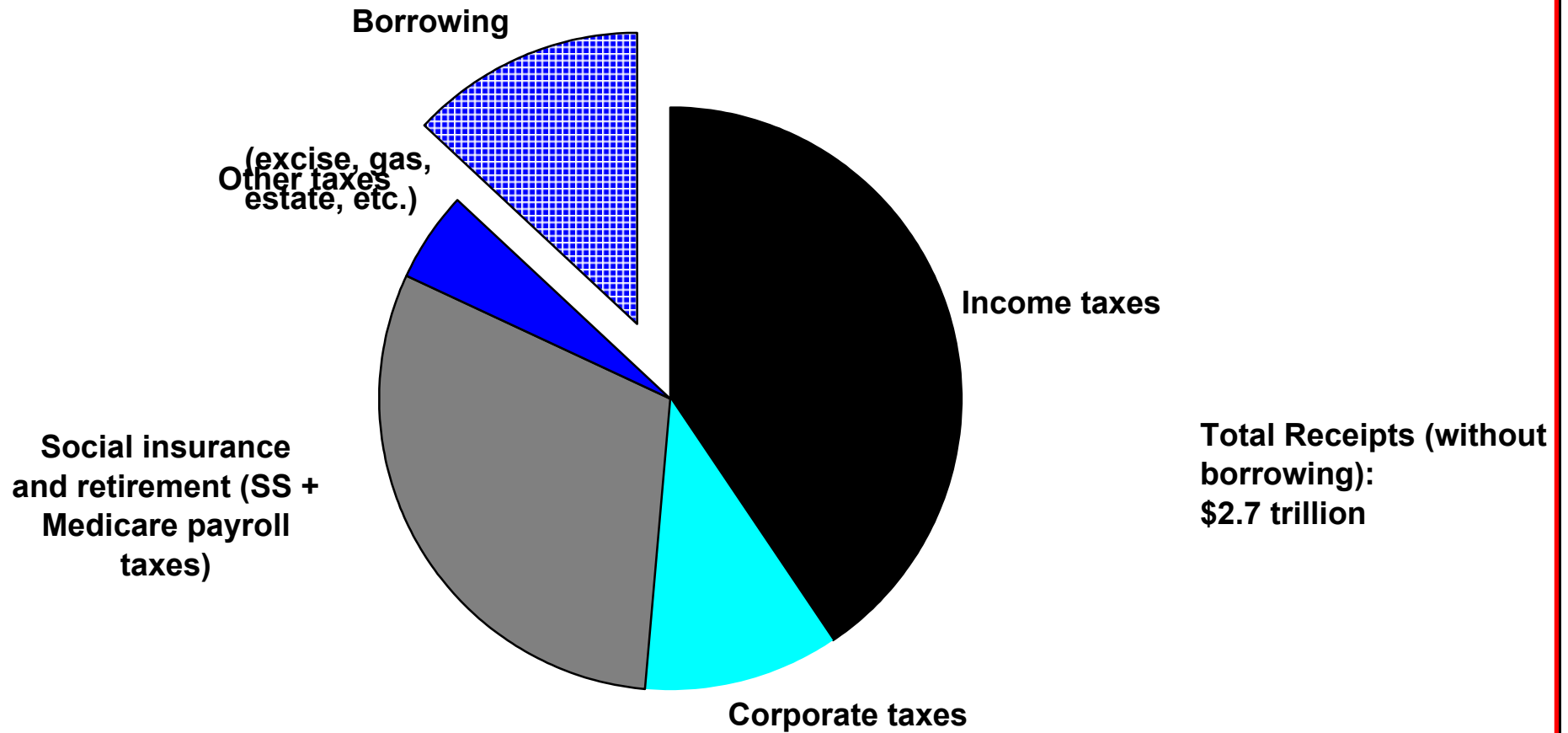
Source: AAAS, based on *Budget of the United States Government FY 2009*.

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Composition of the Proposed FY 2009 Budget by Source of Funds

Total Outlays = \$3.1 trillion

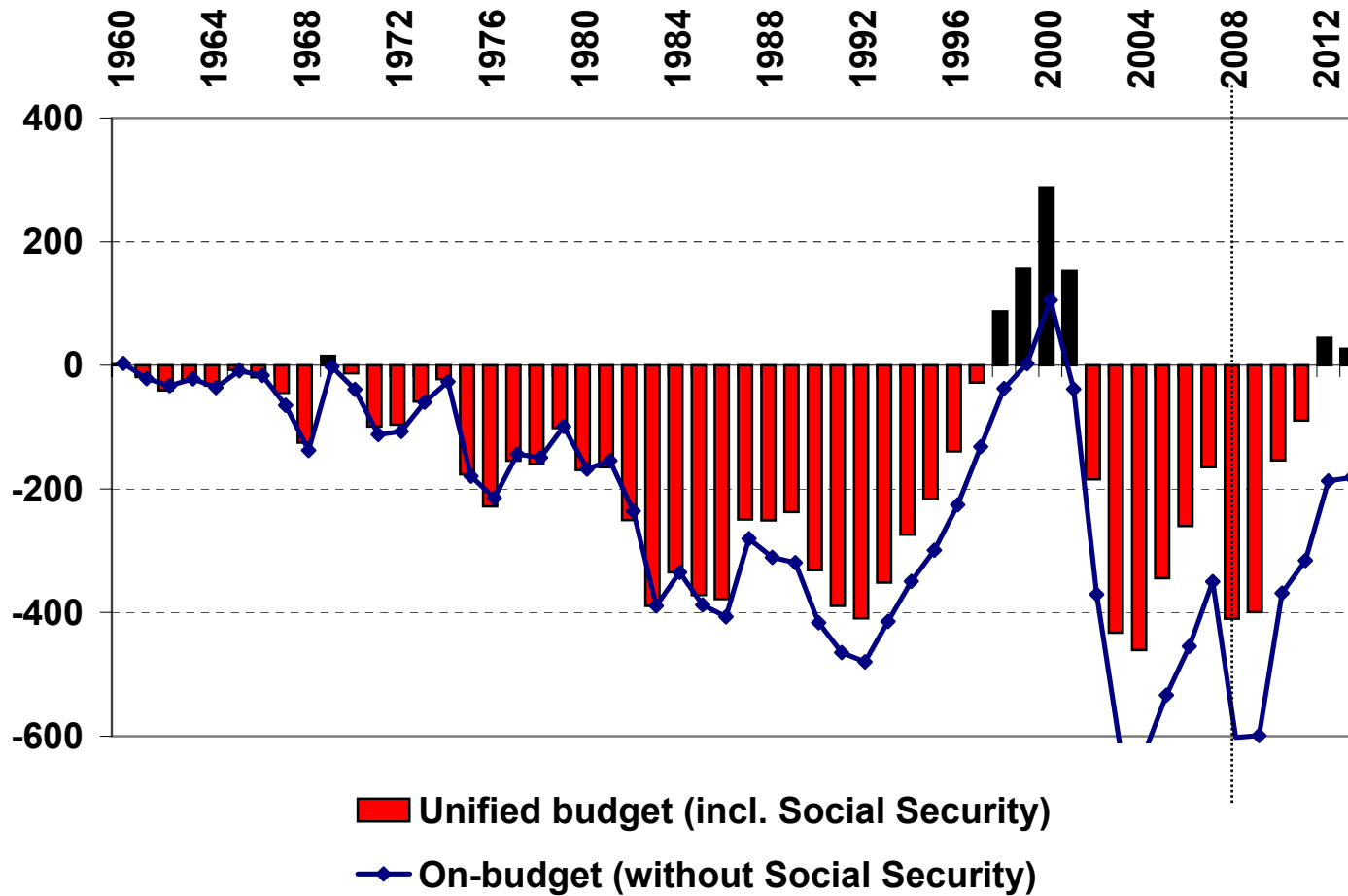


Source: AAAS, based on *Budget of the United States Government FY 2009*.
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Federal Budget Deficit (or Surplus), FY 1960-2013

in billions of CONSTANT FY 2008 dollars



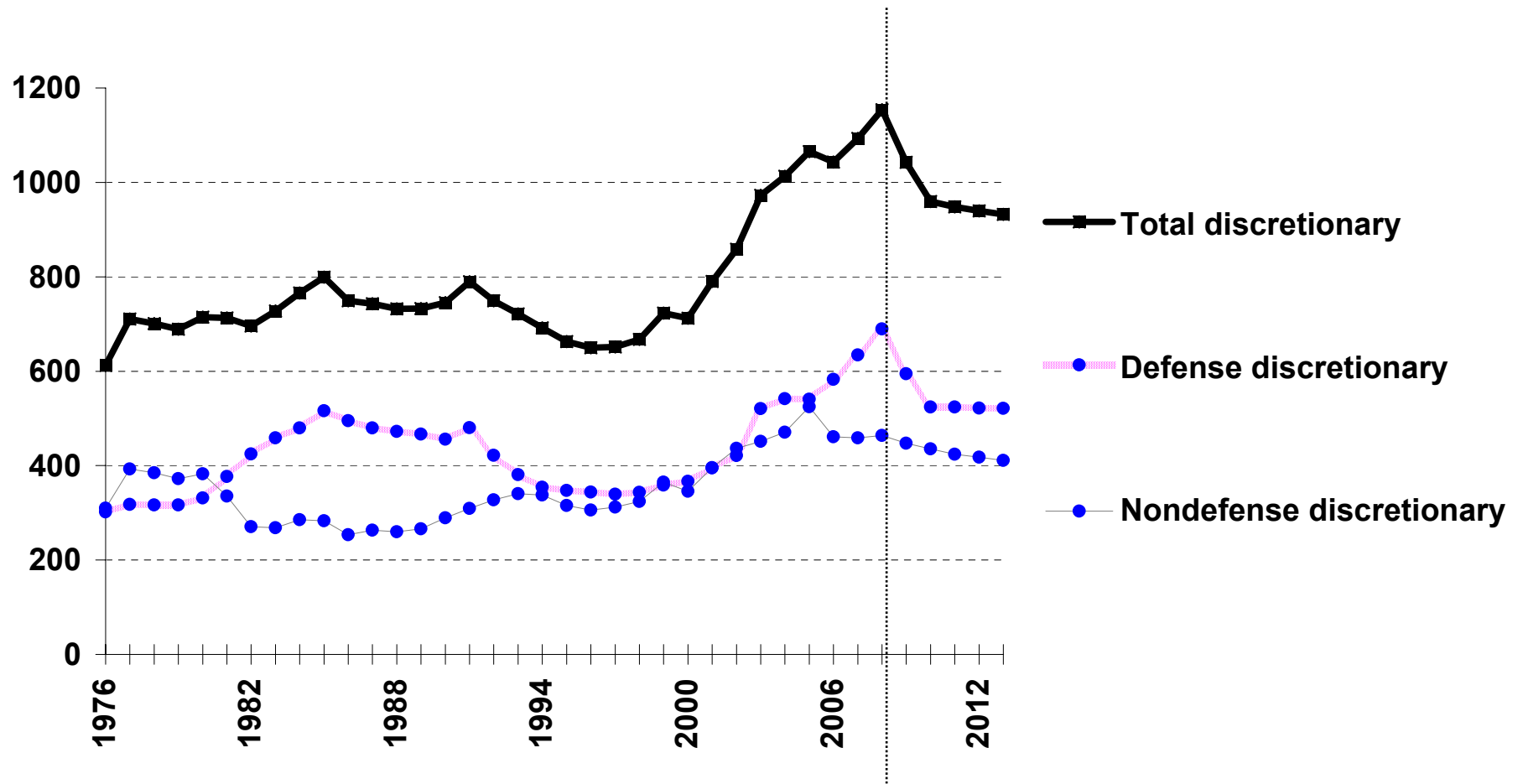
Data in fiscal years. Source: *Budget of the United States Government, FY 2009*. FY 2008 data are estimates. FY 2009-2013 data are President's budget proposals. FY 2009 - 2013 figures exclude Iraq and Afghanistan military costs.

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Trends in Discretionary Spending, FY 1976-2013

in billions of constant FY 2008 dollars

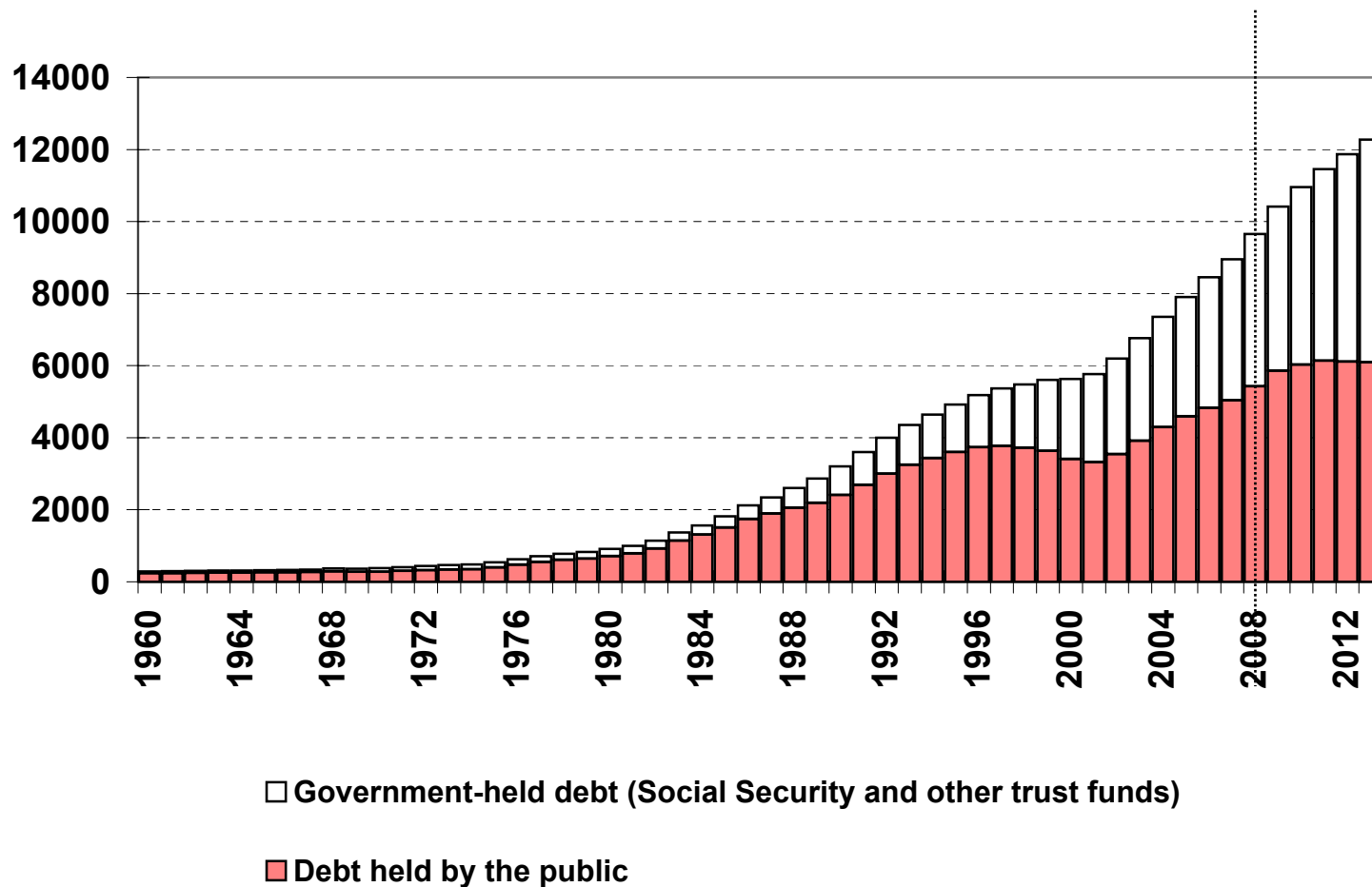


Data in fiscal years. Source: *Budget of the United States Government, FY 2009*.
 FY 2008 data are estimates. FY 2009-2013 data are budget projections. FY
 2009-2013 figures exclude Iraq and Afghanistan military costs.
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The National Debt, 1960-2013

in billions of dollars (President's proposals)



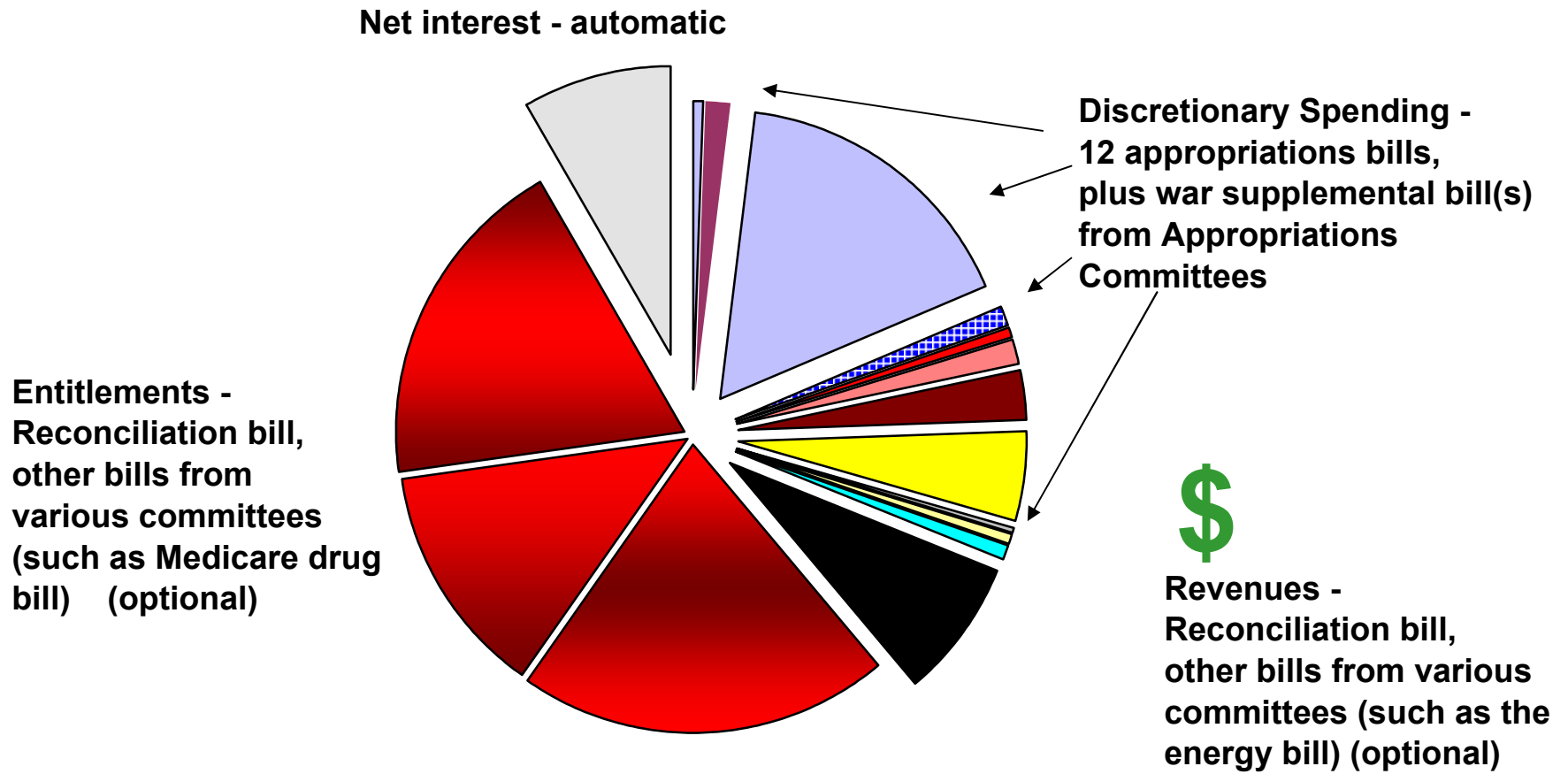
Data in fiscal years. Source: *Budget of the United States Government, FY 2009*. FY 2008 data are estimates. FY 2009-2013 data are budget projections. FY 2009-2013 figures exclude Iraq and Afghanistan military costs.

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How the Budget Becomes Law

FY 2009 Proposal = \$3.1 Trillion



Source: AAAS, based on *Budget of the United States Government FY 2009*.
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The FY 2009 Budget Process - A Summary and Glossary

- Summer '07 Agencies submit their FY 2009 proposals to **OMB** (Office of Management and Budget; part of the office of the President) based on broad strategic guidance from OMB in May '07
- Fall '07 Agencies negotiate with OMB over their FY 2009 proposals
- Jan '08 Agencies finalize their requests
- Feb '08 President Bush releases his proposed FY 2009 budget and formally transmits it to Congress
- Feb - May '08 Agency officials and others (including the public) testify at congressional budget and oversight hearings; authorizing committees try to write and pass **authorization bills** (see next page for definition)
- Spring '08 Congress approves its FY 2009 **budget resolution** (internal congressional document written by Budget Committees establishing broad spending and revenue targets for the entire budget; contains broad instructions for various committees); the FY 2009 budget resolution was finalized June 5.
- Various committees receive instructions from the budget resolution to draft a **reconciliation bill** (a special kind of bill that changes entitlement programs or tax laws; so named because it reconciles differences between current policy and the budget resolution.) This year: no reconciliation bill, but there will be other bills (like the farm bill, possibly an energy bill) with changes to entitlement programs or changes to tax laws.
- Appropriations Committees receive **302(a) allocations** (total amount of discretionary spending, by functional category, from the budget resolution). For FY 2009: Congress is working with \$1.013 trillion, \$21 billion more than the President's budget
- Appropriations Committees determine **302(b) allocations** (total discretionary spending divided among the individual appropriations bills; these can differ between the House and Senate initially, and change constantly.) This year: there are 12 appropriations bills, and this week the House and Senate divide the \$1.013 trillion among the 12 bills.
- June - Sep? '08** Appropriations Subcommittees write **appropriations bills** (bills that fund discretionary programs; the only bills that Congress is required to pass annually), staying within 302(b) allocations. Numerous adjustments to the President's budget are made. The bills are amended and then approved by the full Appropriations Committee in each chamber. Then, the bills go to the House or Senate floors and are amended and then approved by the full House or Senate. (This year, the House Appropriations Committee has so far drafted 5 bills; the Senate Appropriations Committee has drafted 6 bills, with 3 more this week)
- Sep '08** The House and Senate take their separate versions of appropriations bills to **conference** (a committee to resolve differences between the House and Senate versions of a bill), give final approval to the **conference report** (compromise

bill) and send the bill to the President for his signature (deadline: September 30; rarely met). If the President vetoes a bill, start over.

Oct 1 '08 Beginning of fiscal year 2009; discretionary programs must have a signed appropriations bill or they must shut down. To give Congress and the President more time, a **continuing resolution** (temporary appropriations bill covering all unsigned appropriations bills, for a limited period of time; also known as a **CR**) is enacted to allow programs to operate. (The last 2008 appropriations bill was signed into law on December 26. This year's appropriations will also be delayed). When Congress gets eager to wrap things up, they often bundle together unfinished bills into an **omnibus appropriations bill** (a bundle of 2 or more appropriations bills; in 2008, 11 bills were rolled into an omnibus)

ANYTIME For unbudgeted needs, Congress and the President can pass **supplemental appropriations bills** outside the regular budget cycle in a compressed process. Usually for natural disasters and other emergencies, but in recent years Iraq and Afghanistan spending as well. At the end of June, Congress finalized a \$187 billion 2008 supplemental bill, primarily for the war, but also \$338 million in domestic science funding. Much of this spending was designated as 'emergency' spending, meaning it doesn't count against budget resolution targets.

REPEAT process above for the **FY 2010** budget, but delayed slightly. A new administration gets extra time to prepare its first budget, until April or early May.

Additional budget terms:

Authorization bills - These are drafted by House and Senate committees with jurisdiction over a particular agency. (For example, the House S&T Committee writes authorization bills for NSF; some authorization bills go through multiple committees). **Although these bills contain dollar amounts, authorizations are suggested spending levels or spending ceilings and do not actually provide any money.** Authorization bills are also supposed to set policies for agency programs, create or eliminate programs, change program operations, etc. The idea is to have committees with specialized expertise in an agency / program set laws for their area of expertise, and also provide suggested funding levels that appropriators can use as a guide. Some authorization bills DO provide money if they create new mandatory (entitlement) programs.

Appropriations bills - These are drafted only by the Appropriations Committees, and **they provide actual funding for appropriated (discretionary) programs.** There are 12 each year, though there can be other supplemental or emergency appropriations bills.

Reconciliation bill - Bill(s) that change entitlement programs or tax laws; so named because they reconcile differences between current policy and the budget resolution. They are attractive to Congress because they are considered under special rules for debate.

Other terms:

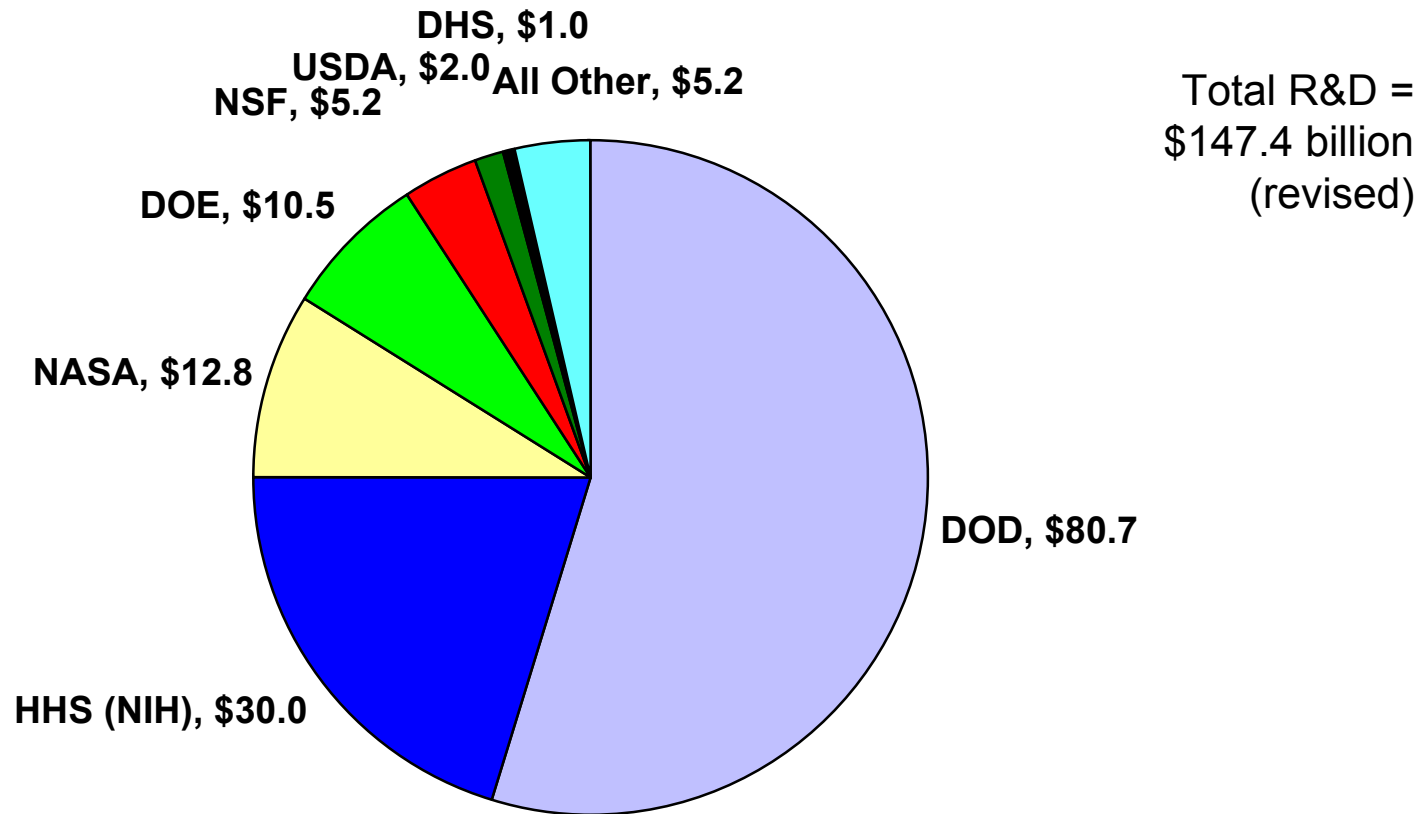
Budget authority is the legal authorization to expend funds; it's money in a bank account. Appropriations bills are written in terms of budget authority.

Obligations represent orders placed, contracts awarded, services received, and similar transactions during a given period, regardless of when the funds were appropriated and when the future payment of money is required; these are checks written or credit card charges.

Outlays represent checks issued and cash payments made during a given period, regardless of when the funds were appropriated or obligated. Also known as expenditures.

Total R&D by Agency: FY 2009 Proposed

Budget Authority in billions of dollars



Source: AAAS, based on OMB R&D Budget Data and agency estimates for FY 2009.

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AAAS Analysis of R&D in the FY 2009 Budget

Table 1. R&D in the FY 2009 Budget by Agency
(budget authority in millions of dollars)

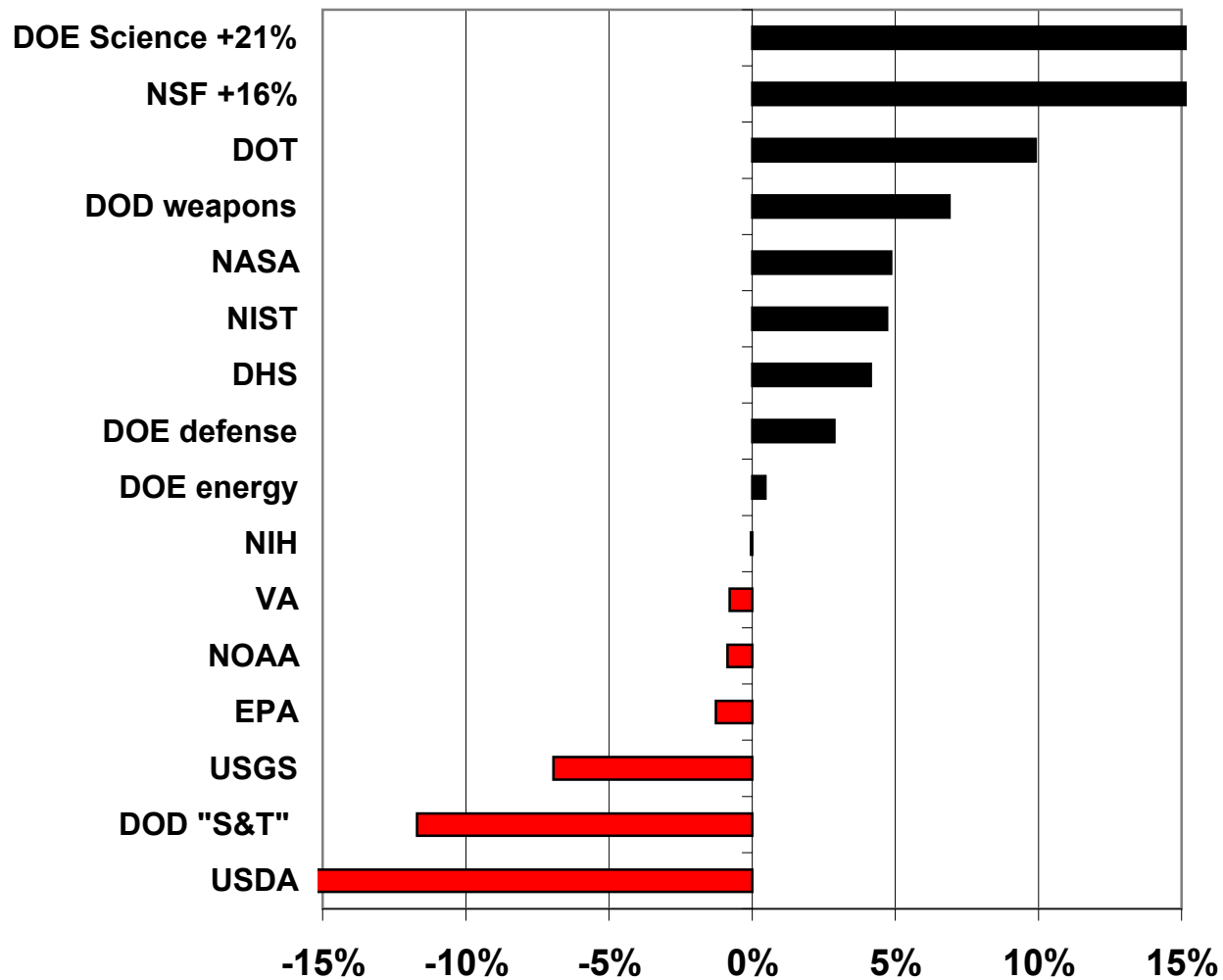
	FY 2007 Actual	FY 2008 Estimate	FY 2009 Budget	Change FY 08-09	
				Amount	Percent
Total R&D (Conduct and Facilities)					
Defense (military)	79,009	77,782	80,688	2,906	3.7%
<i>S&T (6.1-6.3 + medical)</i>	13,518	13,215	11,669	-1,546	-11.7%
<i>All Other DOD R&D</i>	65,490	64,567	69,019	4,452	6.9%
Health and Human Services	29,621	29,816	29,973	157	0.5%
<i>Nat'l Institutes of Health</i>	28,350	28,676	28,666	-10	0.0%
<i>All Other HHS R&D</i>	1,271	1,140	1,307	167	14.6%
NASA	11,582	12,188	12,780	592	4.9%
Energy	9,035	9,661	10,519	858	8.9%
<i>Atomic Energy Defense R&D</i>	3,649	3,718	3,825	107	2.9%
<i>Office of Science</i>	3,560	3,574	4,314	740	20.7%
<i>Energy R&D</i>	1,826	2,369	2,380	11	0.5%
Nat'l Science Foundation	4,440	4,479	5,175	696	15.5%
Agriculture	2,275	2,324	1,955	-369	-15.9%
Commerce	1,073	1,138	1,152	14	1.2%
<i>NOAA</i>	557	581	576	-5	-0.9%
<i>NIST</i>	487	521	546	25	4.7%
Interior	647	676	618	-59	-8.7%
<i>U.S. Geological Survey</i>	574	586	546	-41	-6.9%
Transportation	767	820	902	81	9.9%
Environ. Protection Agency	557	548	541	-7	-1.3%
Veterans Affairs	819	891	884	-7	-0.8%
Education	327	321	324	3	0.9%
Homeland Security	996	992	1,033	41	4.1%
All Other	786	819	821	2	0.2%
Total R&D	141,933	142,456	147,364	4,908	3.4%
Defense R&D	82,658	81,500	84,513	3,013	3.7%
Nondefense R&D	59,276	60,956	62,851	1,895	3.1%
Basic Research	28,166	28,694	29,656	962	3.4%
Applied Research	28,599	28,751	27,626	-1,125	-3.9%
Total Research	56,764	57,445	57,282	-163	-0.3%
Development	81,366	80,570	85,366	4,796	6.0%
R&D Facilities and Equipment	3,803	4,442	4,716	275	6.2%

Source: AAAS, based on OMB data for R&D for FY 2009, agency budget justifications, and information from agency budget offices.

Note: The projected inflation rate between FY 2008 and FY 2009 is 2.0 percent. FY 2008 figures exclude pending supplementals.

March 21, 2008 - REVISED

FY 2009 R&D Request Percent Change from FY 2008

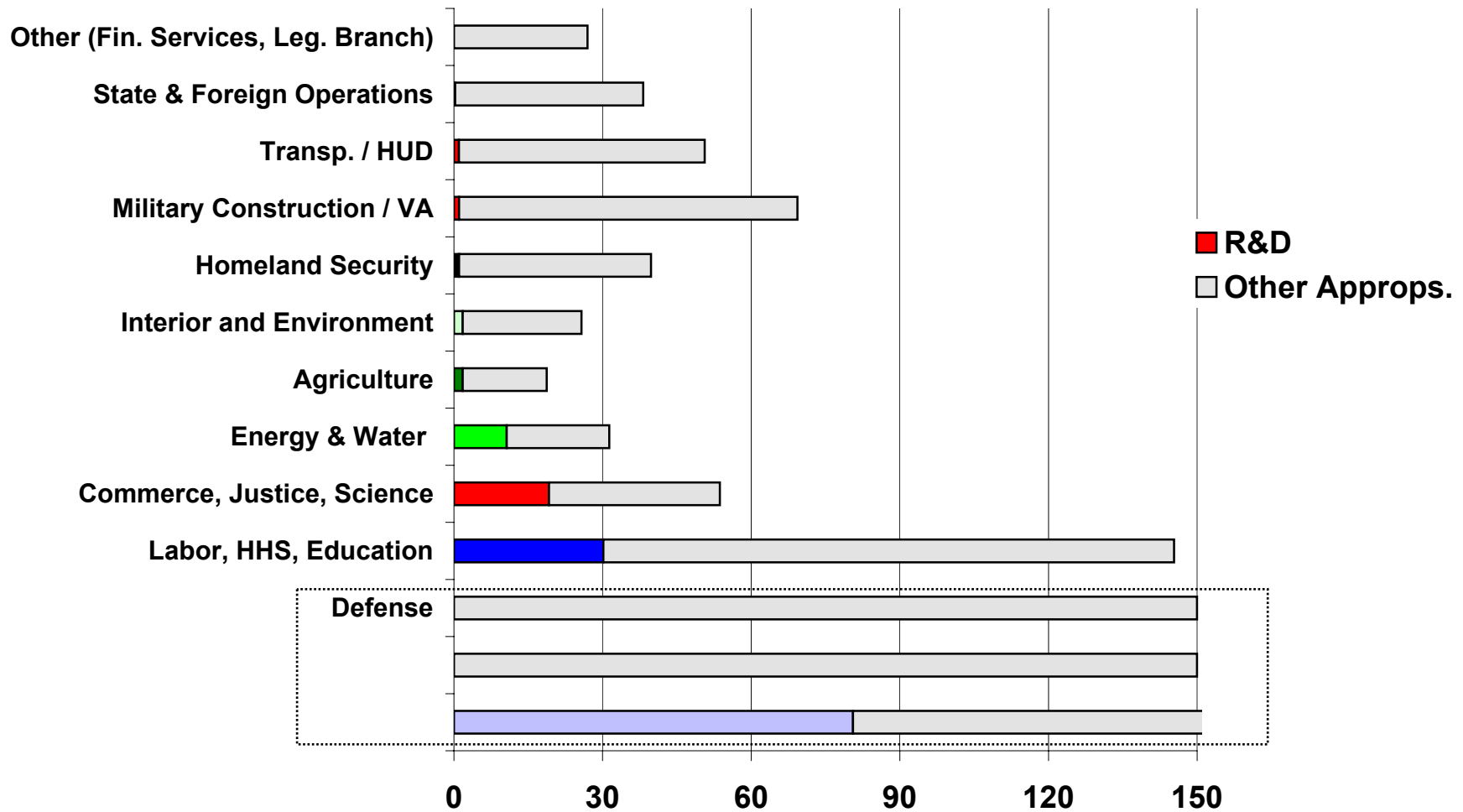


Source: AAAS, based on OMB R&D data and agency estimates for FY 2009.
DOD "S&T" = DOD R&D in "6.1" through "6.3" categories plus medical research.
DOD weapons = DOD R&D in "6.4" and higher categories.
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R&D and Non-R&D Funding by Appropriations Bill

FY 2009 Request, Billions of dollars budget authority

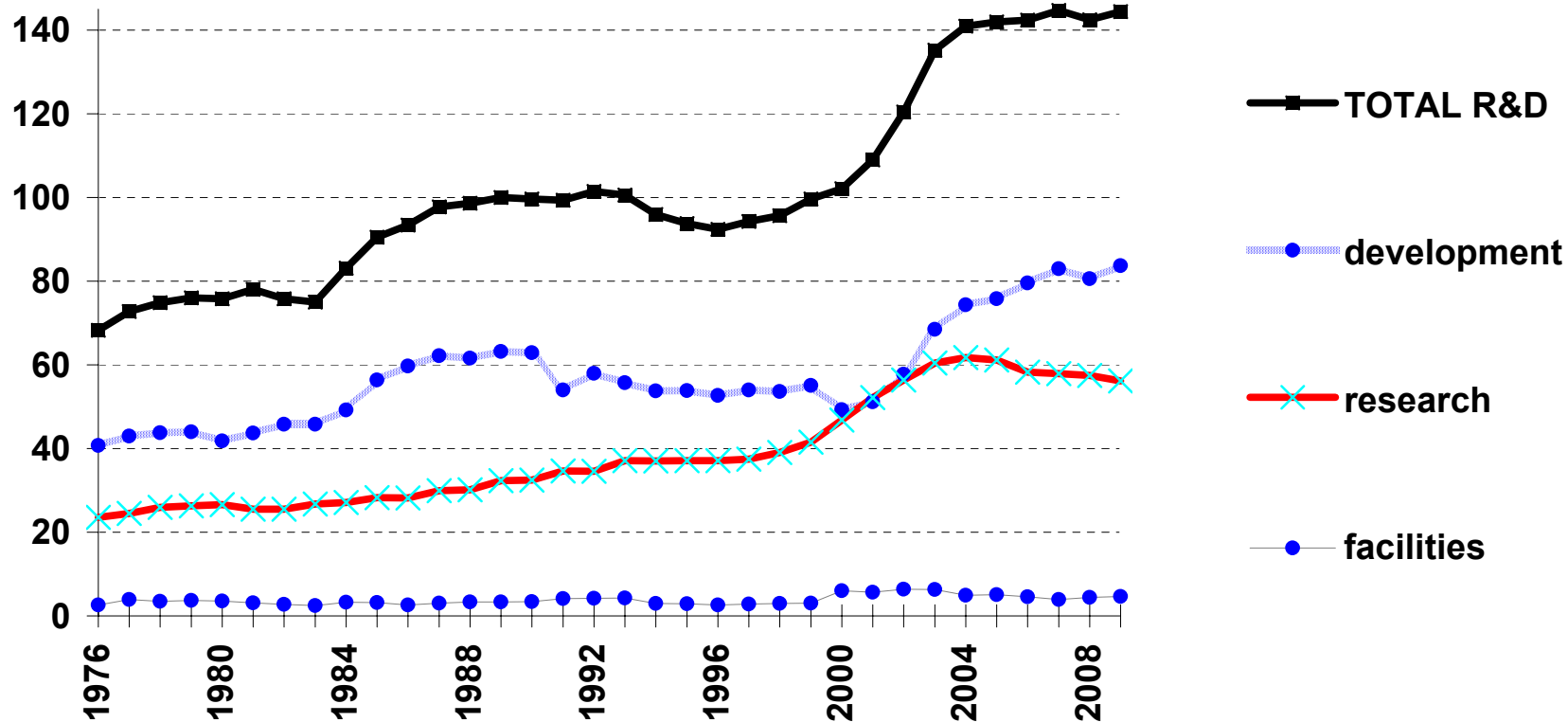


Source: AAAS, based on estimates of R&D in FY 2009 budget and Budget of the U.S. Government FY 2009. Defense bill is in three lines. Includes conduct of R&D and R&D facilities.
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Trends in Federal R&D, FY 1976-2009 *

in billions of constant FY 2008 dollars

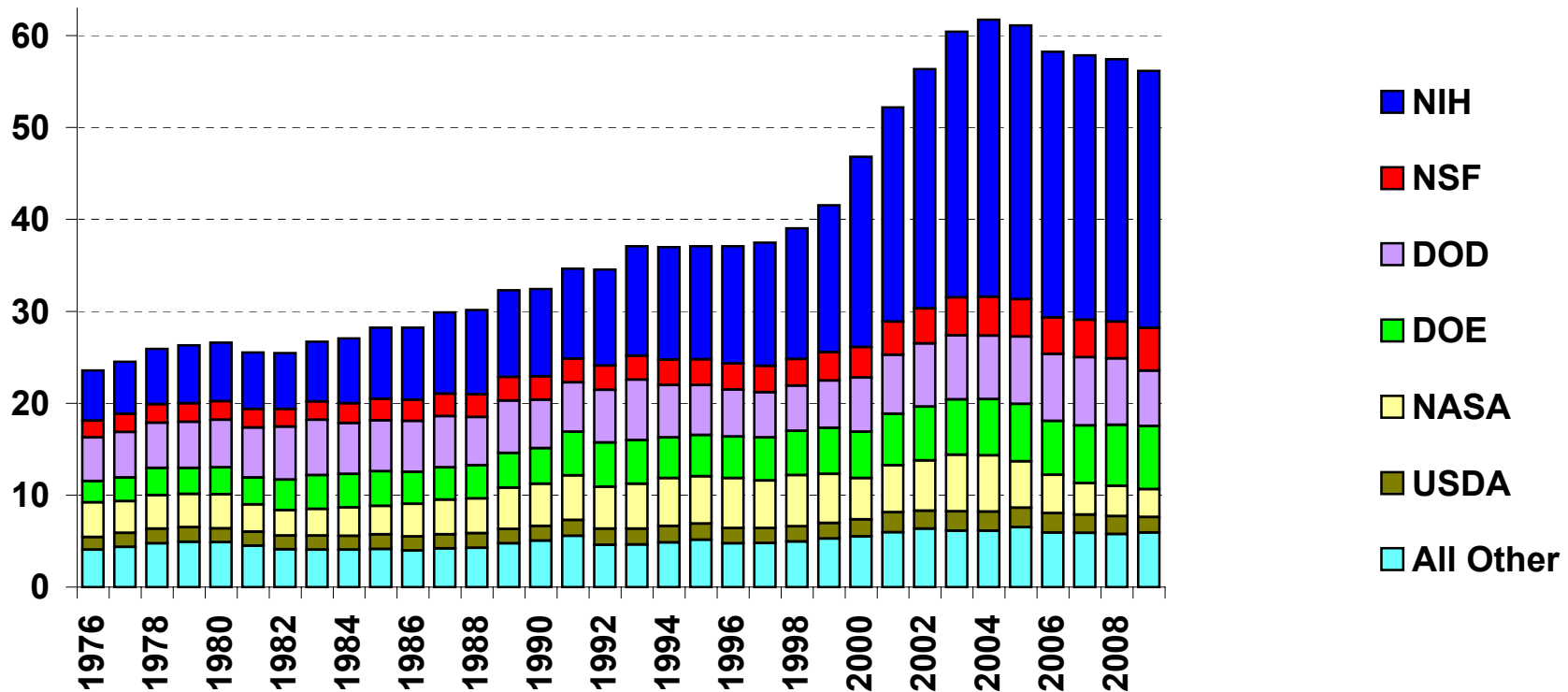


Source: AAAS analyses of R&D in annual AAAS R&D reports. * FY 2009 figures are latest AAAS estimates of FY 2009 request. R&D includes conduct of R&D and R&D facilities. Data to 1984 are obligations from the NSF Federal Funds survey. GDP figures are from OMB, Budget of the U.S. Government FY 2009.
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Trends in Research by Agency, FY 1976-2009 *

in billions of constant FY 2008 dollars



Source: AAAS analyses of R&D in annual AAAS R&D reports.

* FY 2009 figures are latest AAAS estimates of FY 2009 request. Research includes basic research and applied research. 1976-1994 figures are NSF data on obligations in the Federal Funds survey.

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AAAS R&D Web Site:

<http://www.aaas.org/spp/rd>

AAAS Science and Policy Programs (includes R&D Program, Center for S&T in Congress, Fellowships)

http://www.aaas.org/programs/science_policy/

Links to agency budget documents:

<http://www.aaas.org/spp/rd/brief09.htm>

SCIENCE On Line

<http://www.sciencemag.org/>

Budget of the U.S. Government FY 2009 (full text on line):

<http://www.whitehouse.gov/omb/budget/fy2009/>

THOMAS (text of all congressional legislation)

<http://thomas.loc.gov>

Congressional Budget Office

<http://www.cbo.gov>

FY 2009 Appropriations Legislation

<http://thomas.loc.gov/home/approp/app09.html>

House Appropriations Committee

<http://appropriations.house.gov/>

Senate Appropriations Committee

<http://appropriations.senate.gov/>

Statistics on R&D Funding and Other S&E from the National Science Foundation:

<http://www.nsf.gov/statistics>

WHAT'S NEXT?

The goal: complete all 2009 appropriations bills by October 1, but President Bush has threatened to veto any bills that exceed his request; most of them will do so. So Congress may not even try to send all 12 appropriations bills to President Bush by October 1. Instead, the appropriations process could drag on past the November elections and even past the inauguration of the next president.

Policymakers remain worried about research funding trends: U.S. government research is on a downward trend, even as many Asian nations dramatically expand their research funding.

For more information:

The AAAS R&D web site is www.aaas.org/spp/rd

