

The Outlook for Federal R&D

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IUCRC Meeting • January 2012



Outcome of the FY2012 Budget Process

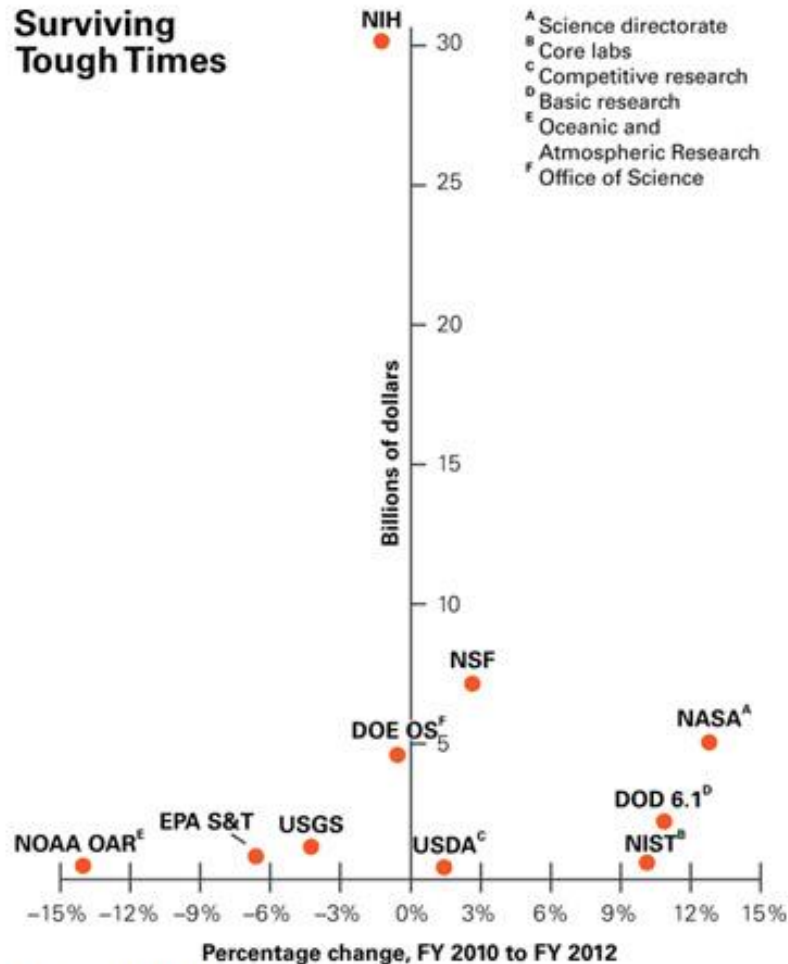
- Not too bad, considering. . .
- Despite the sound and fury, research remained “a favored child” in the final budget
- Most science agencies escaped major cuts
- NSF R&D: 3% above 2011, but 9% below request

Research Remains a Favored Child in Budget Decisions

Science 6 January 2012:
vol. 335 no. 6064 25-26



Surviving Tough Times



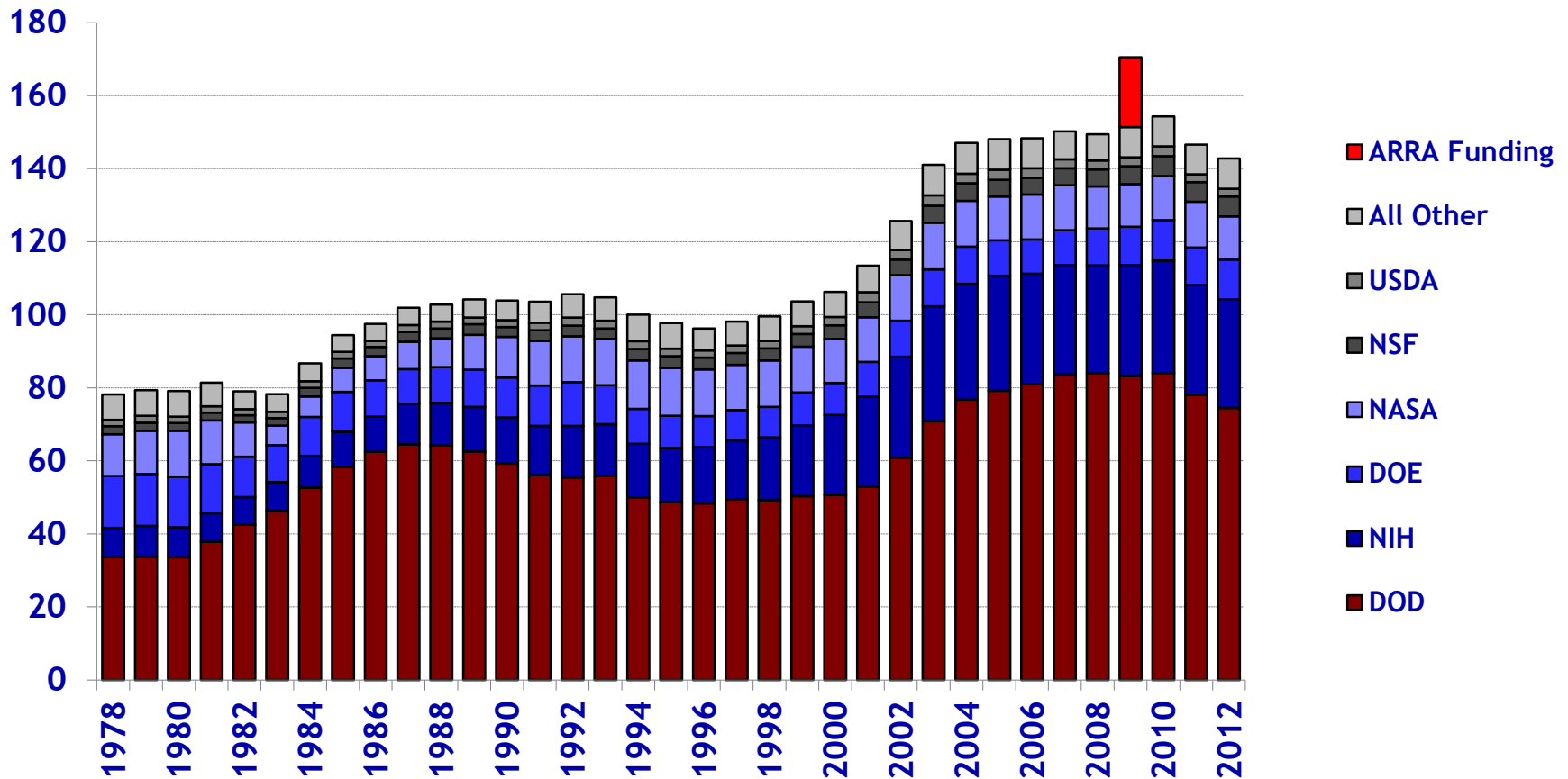
A steady hand.

The biggest science agencies have seen little change in their budgets over the past 2 years, while there's been greater variation among smaller agencies.

GRAPH SOURCE: EXECUTIVE BRANCH/U.S. CONGRESS

Trends in R&D by Agency

in billions of constant FY 2011 dollars

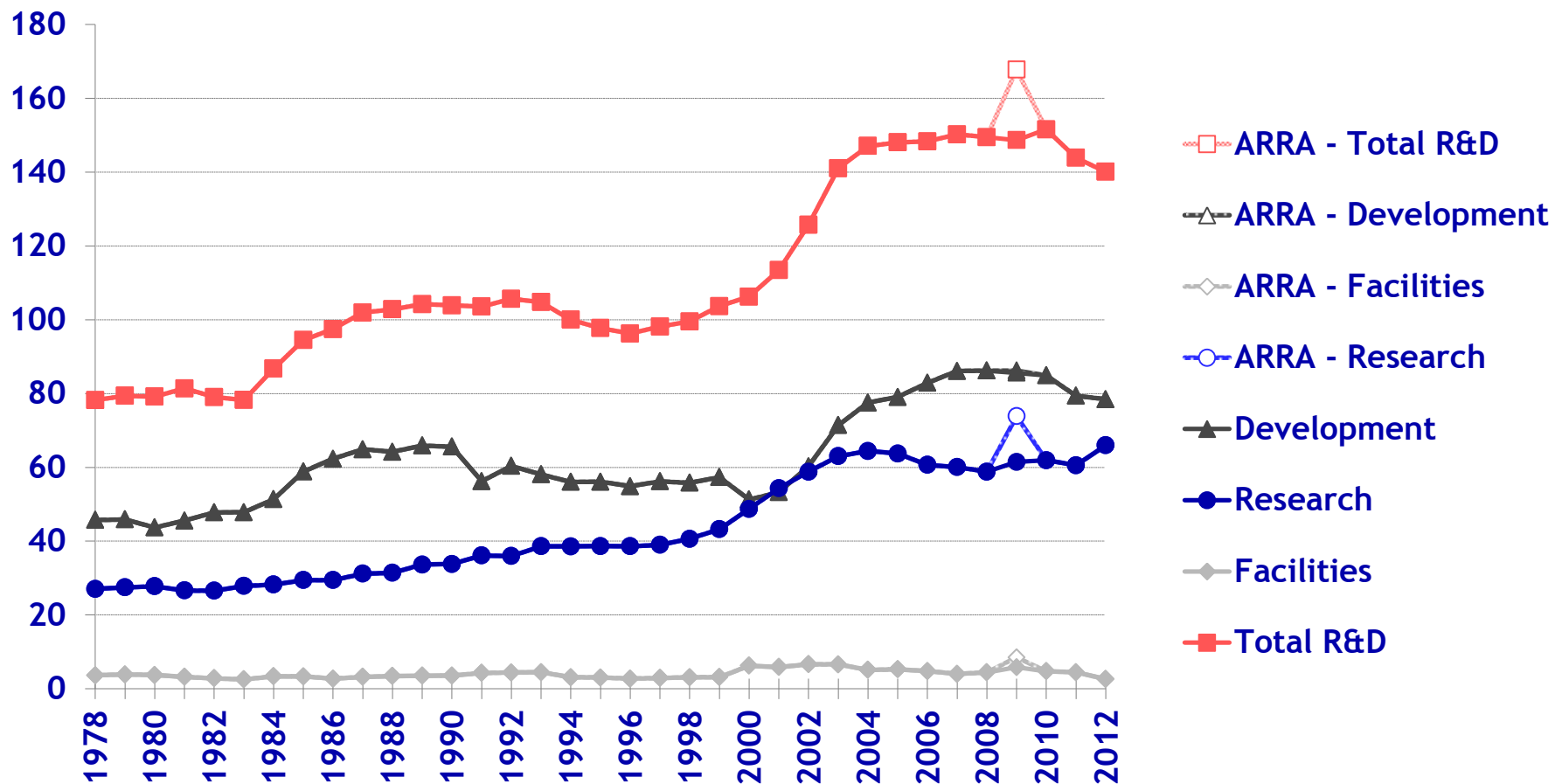


Source: AAAS Report: Research & Development series.
 FY 2012 figures are latest estimates.
 1976-1994 figures are NSF data on obligations in the Federal Funds survey.
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Trends in Federal R&D

in billions of constant FY 2011 dollars

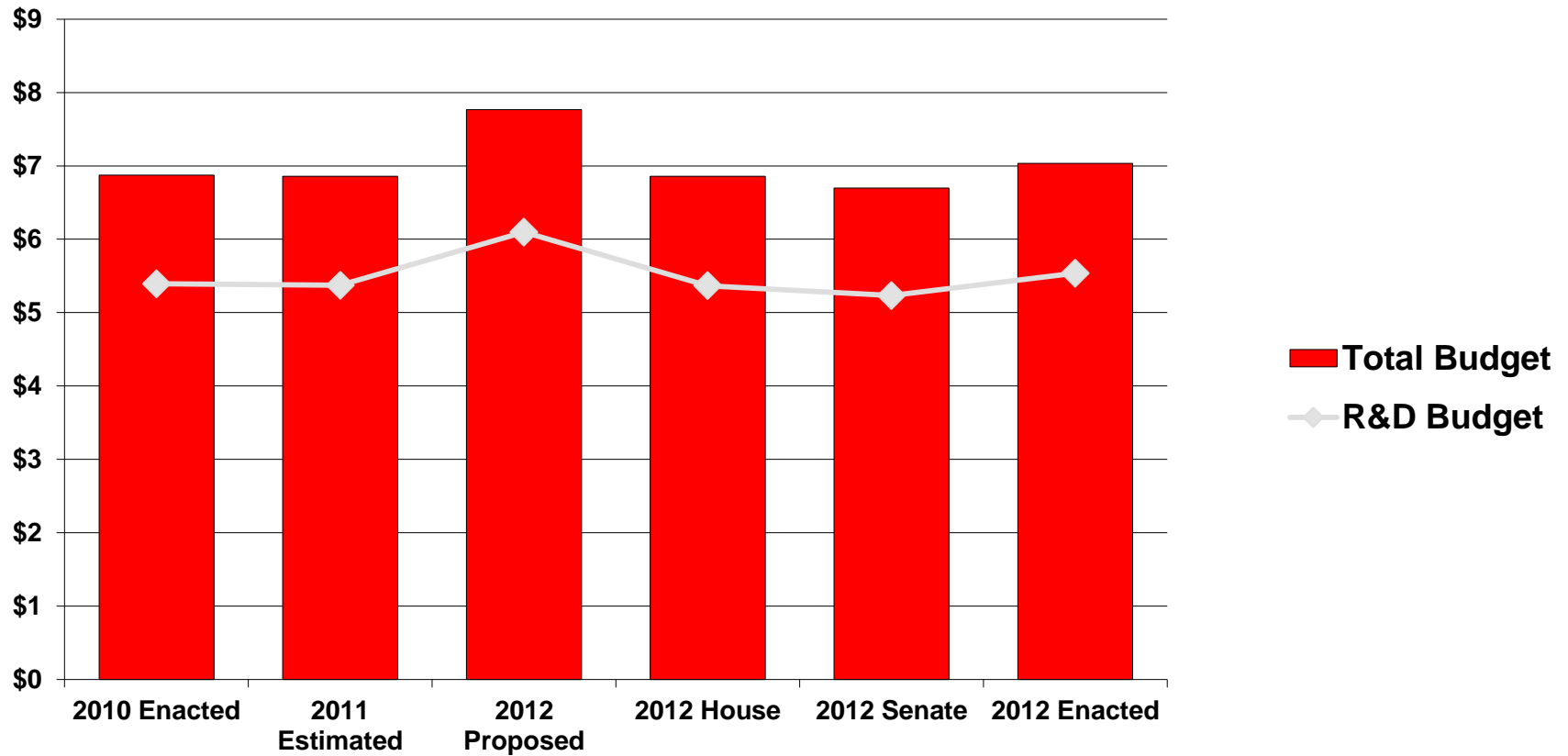


Source: OMB R&D data, AAAS analyses of R&D in annual AAAS R&D reports.
 FY 2012 figures are latest AAAS estimates.
 R&D includes conduct of R&D and R&D facilities.
 1976-1994 figures are NSF data on obligations in the Federal Funds survey.
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Recent Changes in the National Science Foundation Budget

(budget authority in billions of dollars)



Source: AAAS analysis of OMB and agency budget documents, appropriations bills and reports.
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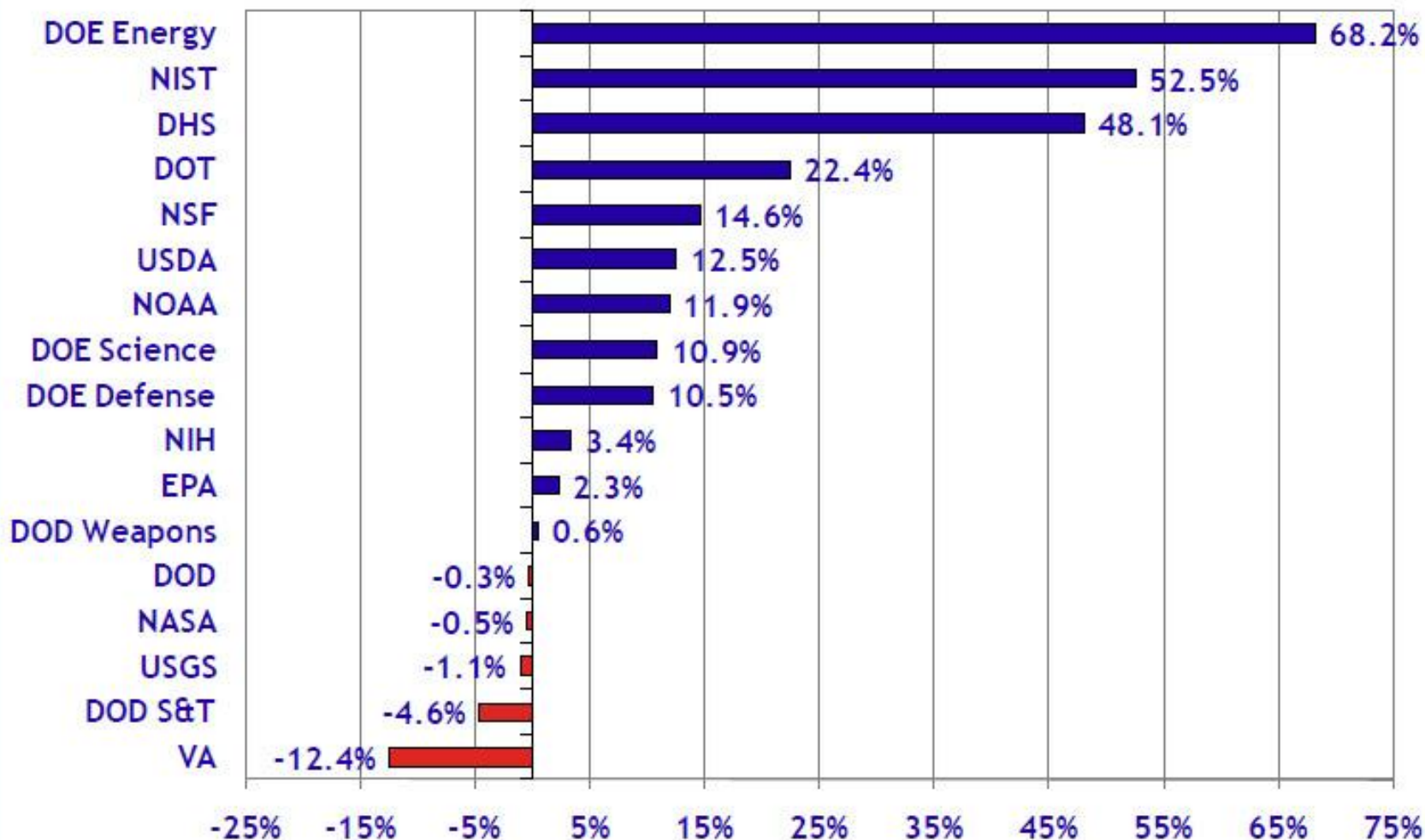


President Proposed An Ambitious Budget

- Priorities reflected America COMPETES
- Jumpstarting innovation/scientific discovery
- ~14% increase for NSF, DOE/Sci, NIST
- Continuing on doubling path
- Big boosts for clean energy, climate science
- Permanent, expanded, simplified R&E tax credit
- Initiatives in STEM education, infrastructure

R&D in the FY 2012 Budget Request

percent change from FY 2011



Source: OMB R&D data, agency budget justifications, and other agency documents.

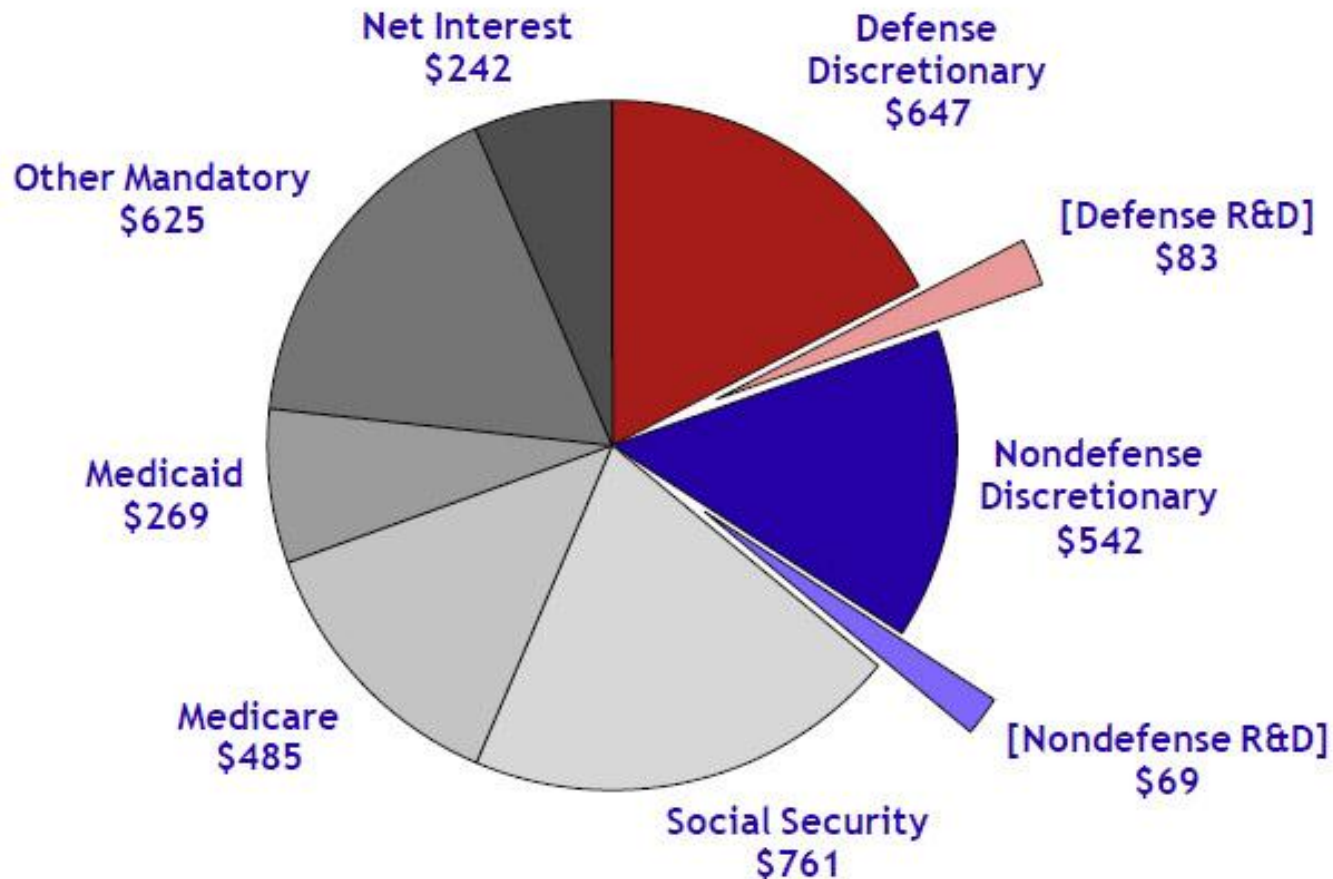
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Composition of the Proposed FY 2012 Budget

Total Outlays = \$3.7 trillion

outlays in billions of dollars



Source: *Budget of the United States Government FY 2012*.

Projected unified deficit is \$ 1.1 trillion.

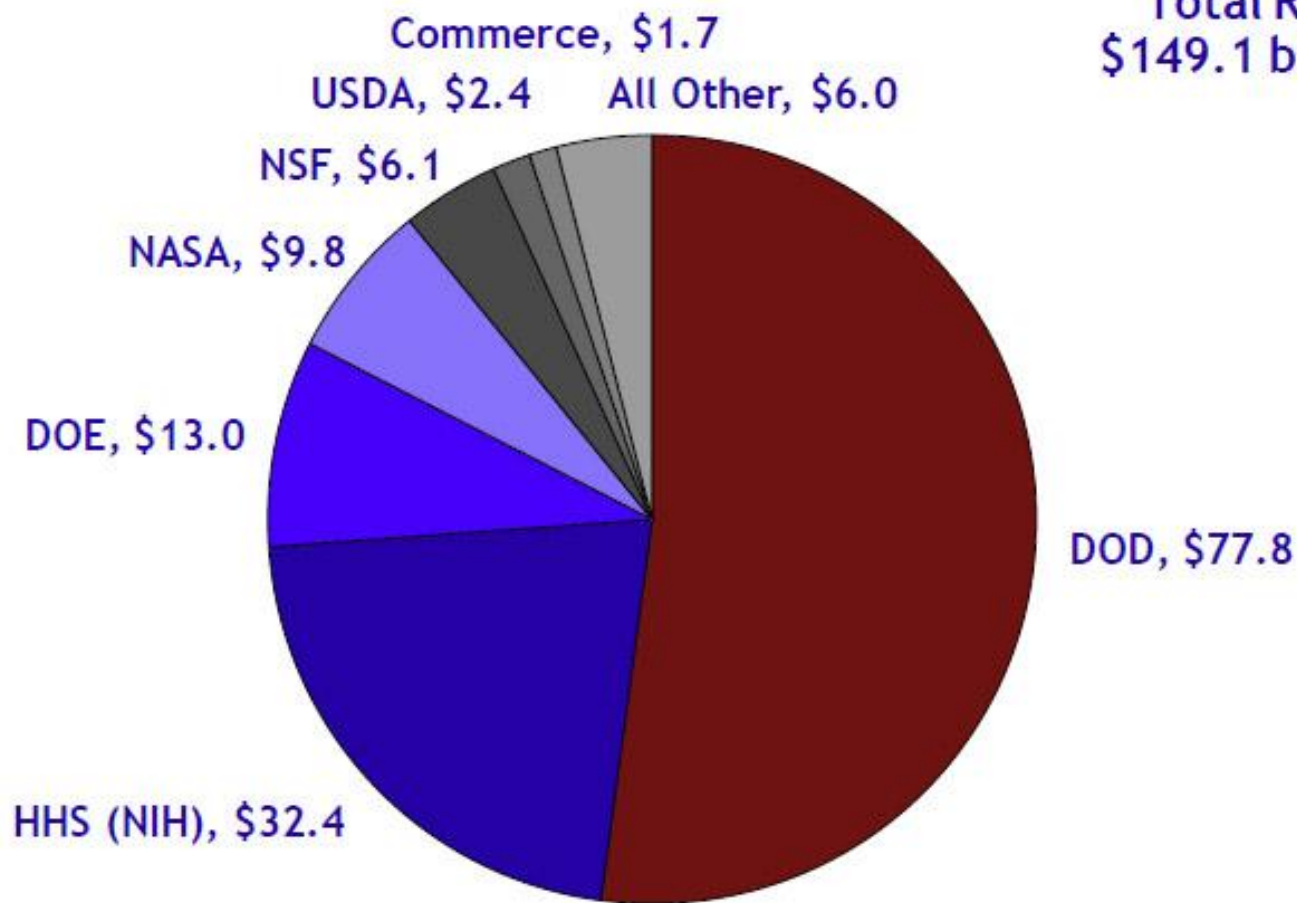
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Total R&D by Agency, FY 2012

budget authority in billions of dollars

Total R&D =
\$149.1 billion



Source: OMB R&D data, agency budget justifications, and other agency documents.

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

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2011 –The Year of Budget Battles

- House countered President with H.R. 1 - \$100 billion cuts in discretionary spending for FY 2012
- FY 2011, meanwhile, was not settled until April
- Final FY 2011 compromise treated civilian R&D reasonably well
 - Non-defense R&D: - 0.9% vs. FY 2010
 - Defense R&D: - 5.4% vs. FY 2010

Next Came the Debt Ceiling Battle

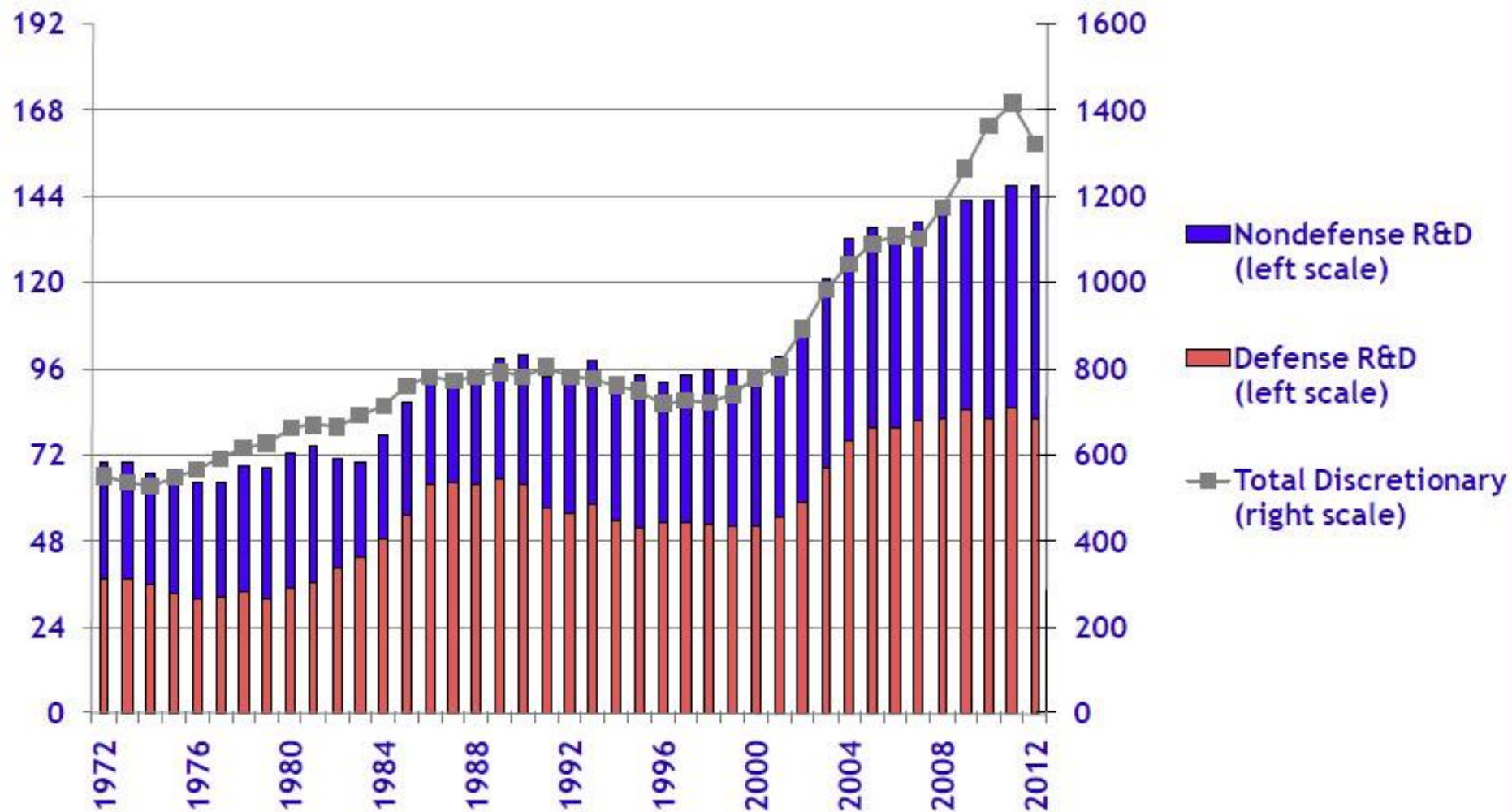
- “Resolved” by Budget Control Act of 2011
- Allowed President to raise debt ceiling; requires him to find \$1.2T cuts through 2021
- Established “Super Committee” to find additional \$1.5T cuts by late December
- Super Committee failed, so sequestration will be triggered on Jan. 2, 2013 (unless Congress acts)
- Little impact on FY 2012 appropriations
- But in FY 2013 would result in discretionary cuts of 10% for defense, 7.8% for non-defense

What's Next?

- Cuts in discretionary spending are inevitable
- R&D trends generally follow trends in discretionary spending
- R&D = 12% +/- 1.5% of discretionary spending (except for stimulus)

Trends in R&D and Discretionary Spending

outlays in billions of constant FY 2011 dollars



Source: *Budget of the United States Government, FY 2012.*

R&D totals do not include construction of facilities and equipment.

FY 2011-2012 data are budget projections.

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Will Science Continue to be “the Favored Child?”

- Much depends on the 2012 election
 - Party control of Congress & White House will determine balance between spending cuts and tax increases
- Support of science fits Obama’s priorities
- GOP candidates said to be “anti-science” – but most are *pro*-research funding!

My crystal ball is not just cloudy –
it's cracked!



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