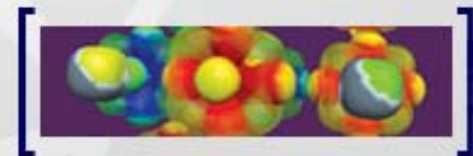




National Science Foundation



# **NSF Regional Grants Conference**

## **Introduction & NSF Overview**

October 20-21, 2008

Hosted by: **The University of Nebraska Lincoln**  
**Omaha, NE**

# Ask Early, Ask Often!

Name	Title	Contact
Tom Cooley	Chief Financial Officer & Director, Office of Budget, Finance & Award Management (BFA)	<a href="mailto:tcooley@nsf.gov">tcooley@nsf.gov</a> (703) 292-8200



# Main Topics

- **Origins of NSF**
- **The National Science Foundation**
- **NSF FY 2008 Budget: Context & Outcome**
- **The NSF FY 2009 Budget Request**
  - NSF Initiatives
  - Outcomes
- **Current Proposal, Award and Funding Trends**



# Origins of NSF

- “The Government should accept new responsibilities for promoting the flow of scientific knowledge and the development of scientific talent in our youth.”
  - Science, The Endless Frontier, 1945
- 1947: Congress Approves, Truman Vetoes: Agencies created in the meantime
- 1950: Compromise Bill Approved & Signed by Truman



# NSF Act of 1950

- “To promote the progress of science...”
- NSB (24) and 1 Director, appointed by the President
- Encourage & develop a national policy for the promotion of basic research and education in the math, physical, medical, biological, engineering and other sciences
- Initiate & support basic scientific research in the sciences
- Evaluate the science research programs undertaken by agencies of the Federal government
- Provide information for S&E policy formation



# NSF Vision

**Advancing discovery,  
innovation and education  
beyond the frontiers of current  
knowledge, and empowering  
future generations in science  
and engineering.**



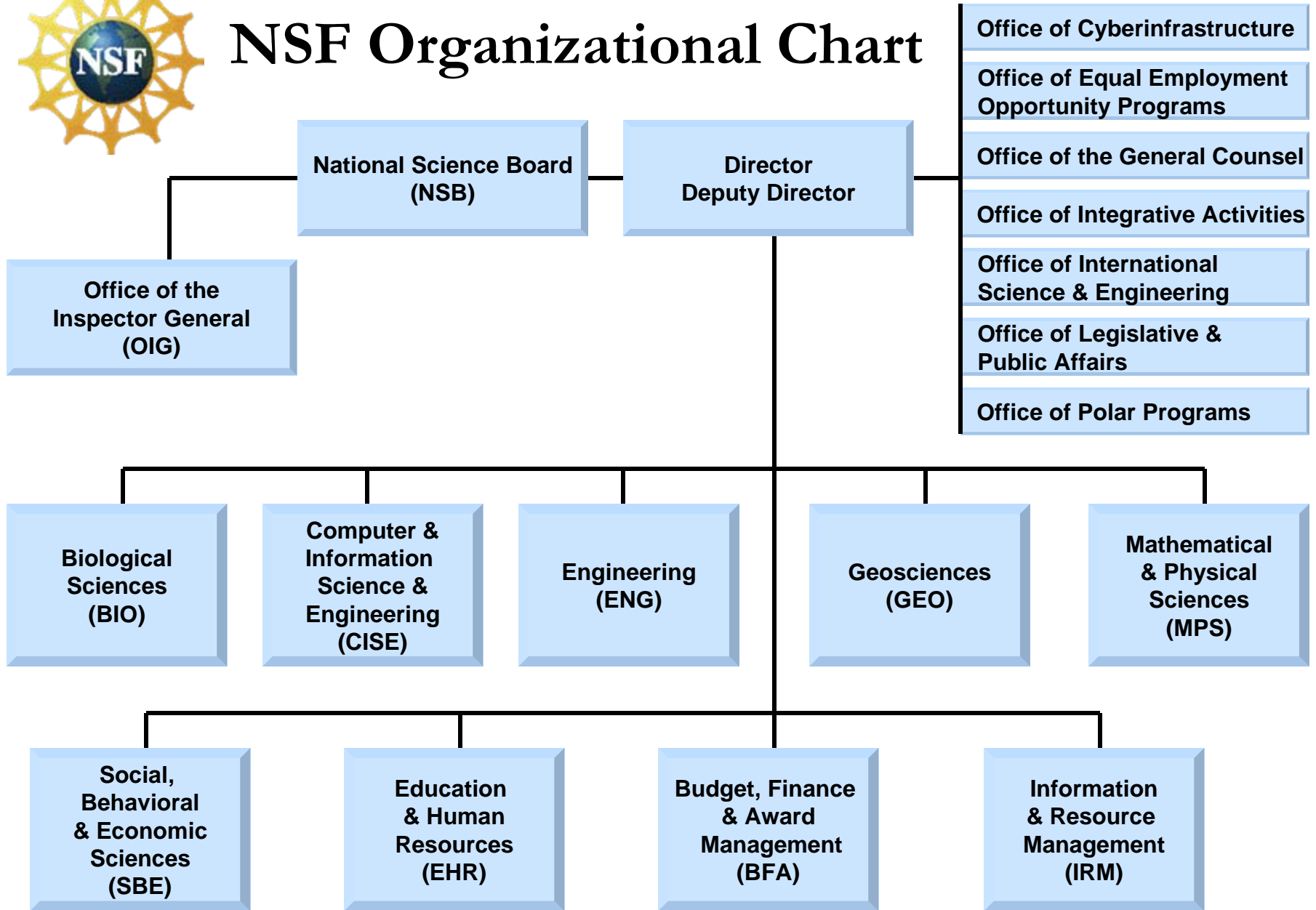
# NSF in a Nutshell

- Independent Agency
- Supports basic research & education
- Uses grant mechanism
- Low overhead; highly automated
- Discipline-based structure
- Cross-disciplinary mechanisms
- Use of Rotators/IPAs
- National Science Board





# NSF Organizational Chart





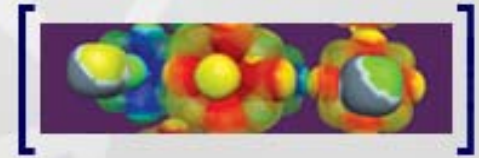
# NSF: Recent Personnel Changes

- **Thomas W. Peterson** selected as **Assistant Director for Engineering**
- **Dr. Edward Seidel** named as **Director of the Office of Cyberinfrastructure (OCI)**
- **Dr. Tim Killeen** named **Assistant Director for Geosciences (GEO)**
- **Dr. W. Lance Haworth** appointed **Director of the NSF Office of Integrative Activities**
- **Dr. Henry Blount** named **Head, EPSCoR Office (EPSCoR moved to the Office of the Director)**



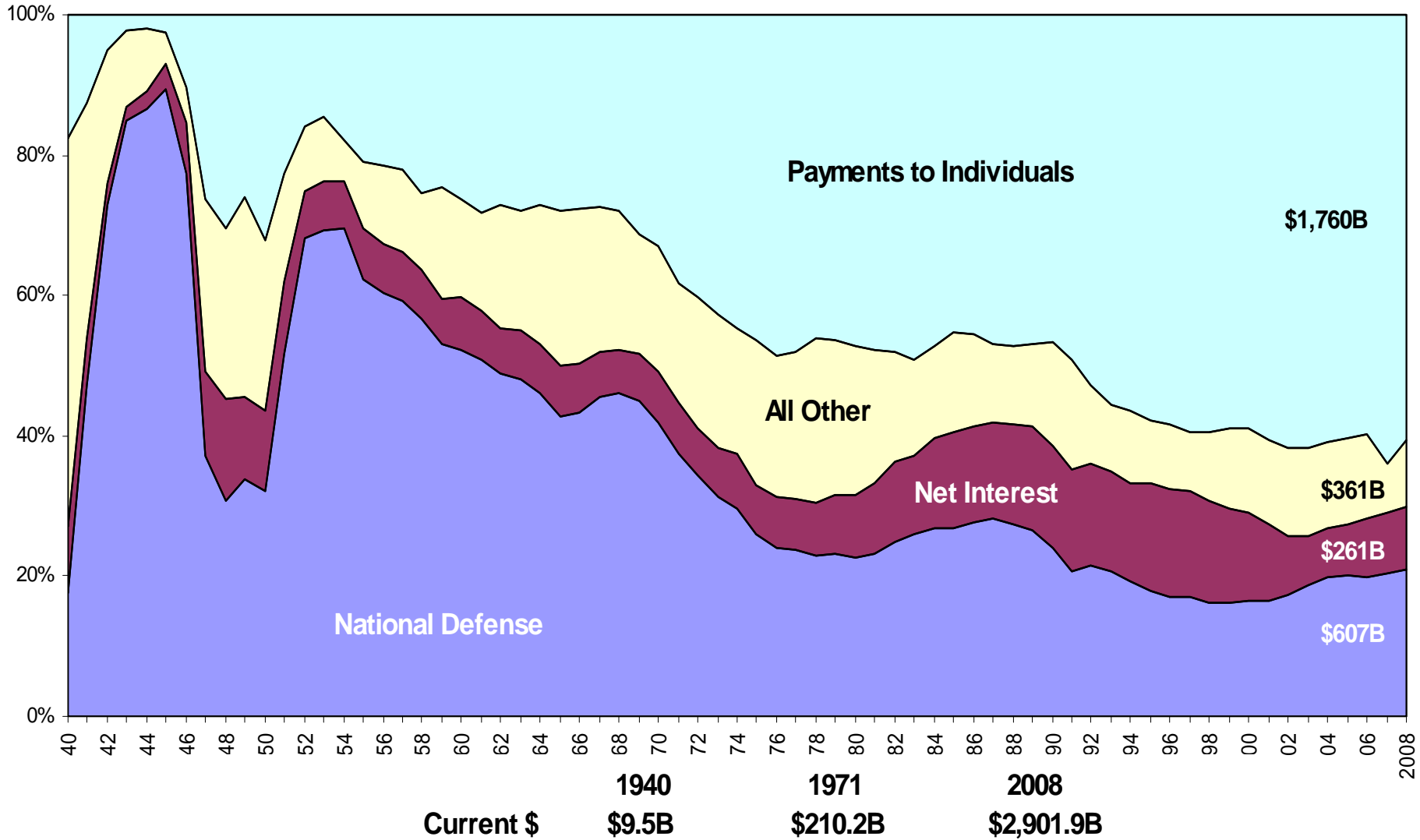


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# Budget Context & Outcome

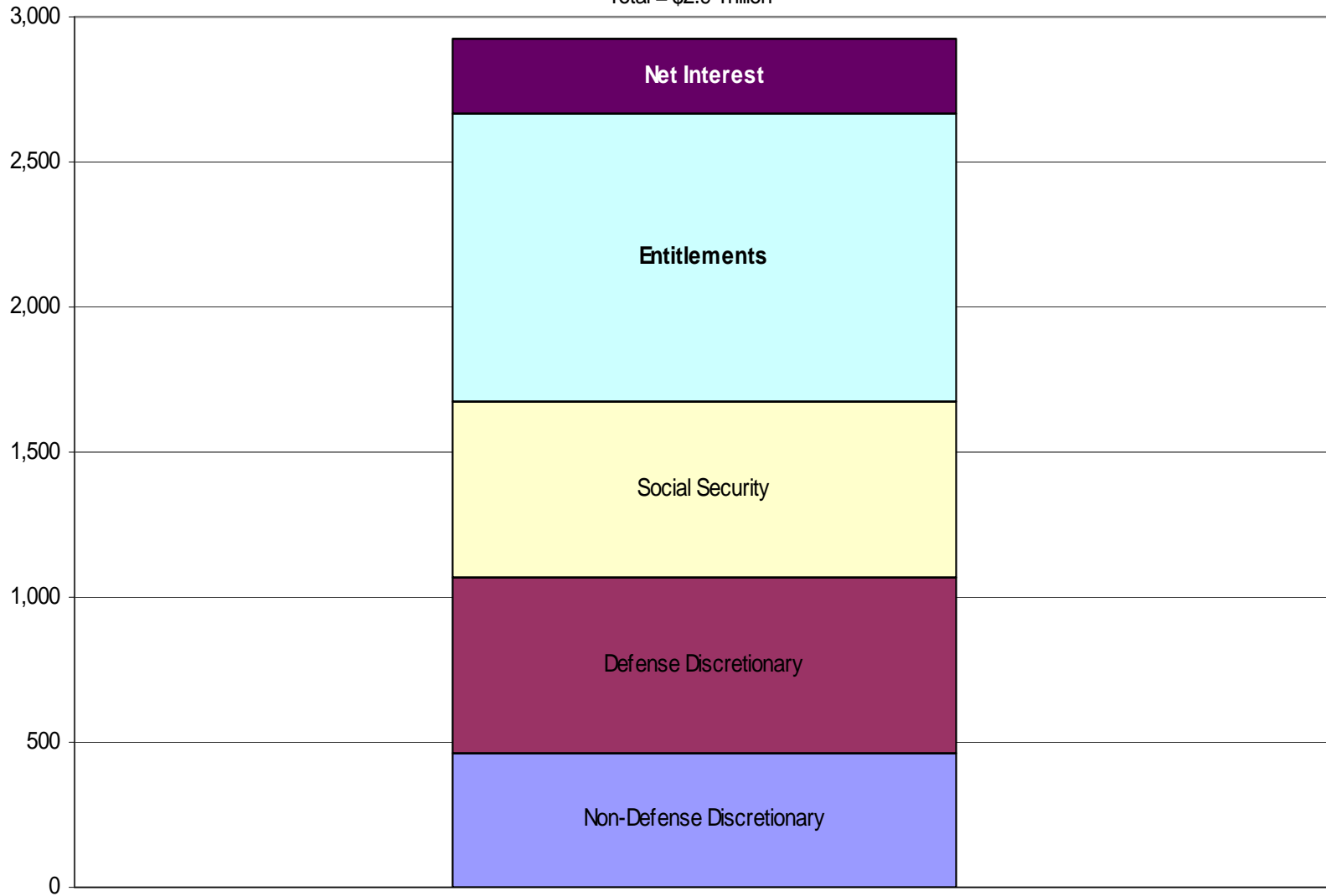
# Percentage Composition of Federal Government Outlays



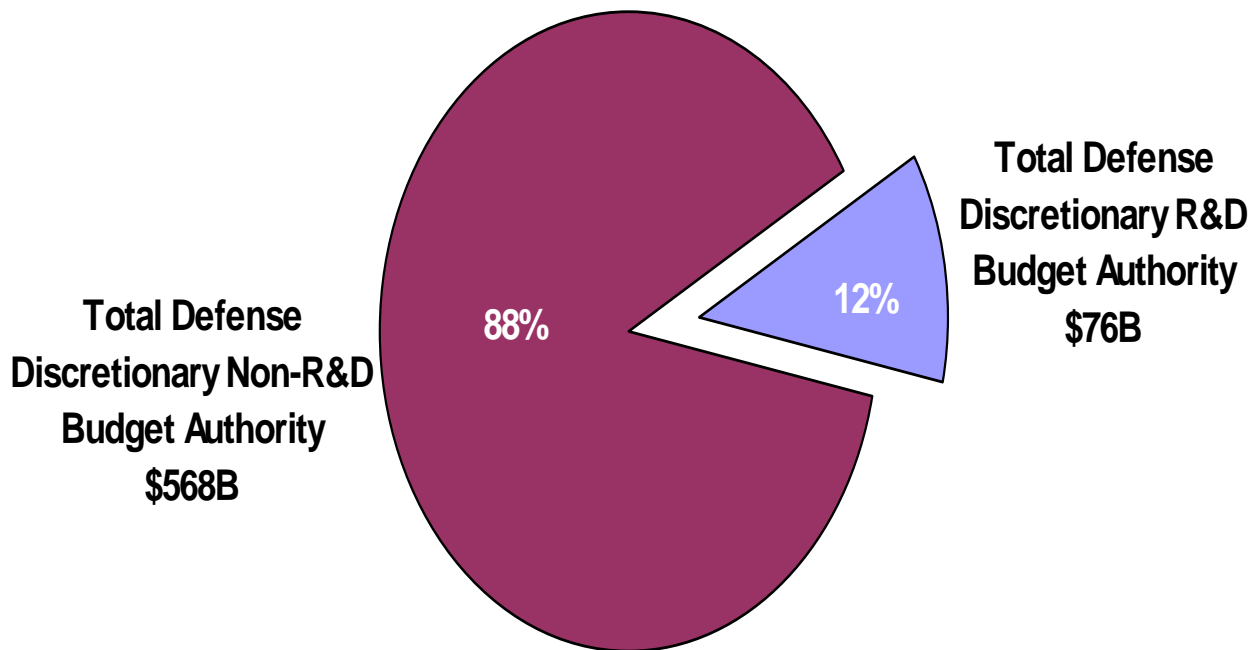
# Federal Spending - FY 2008

Total = \$2.9 Trillion

\$ in Billions



# Defense R&D as a Percent of Total Defense Discretionary Budget Authority – FY 2008

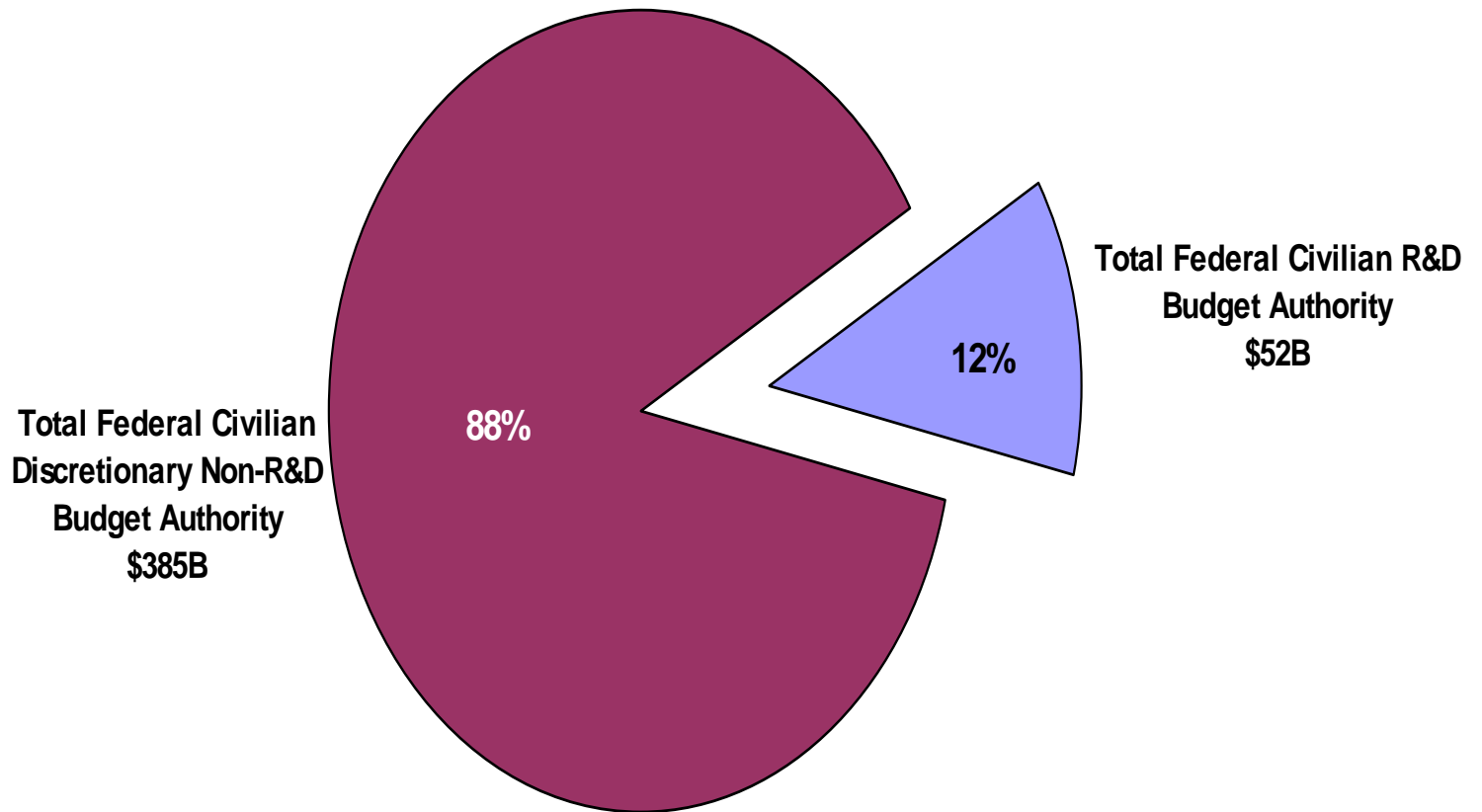


Total = \$644B



# Federal Civilian R&D as a Percent of Total Civilian Discretionary Budget Authority -- FY 2008

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# FY 2008 Outcome

- Was not encouraging for NSF's doubling
- Small increases, but major fix in support of our infrastructure (people, building, IT systems such as FastLane and Research.gov)
- Supplemental, a little extra, but pointed to Congressional support for the Noyce Program by and large

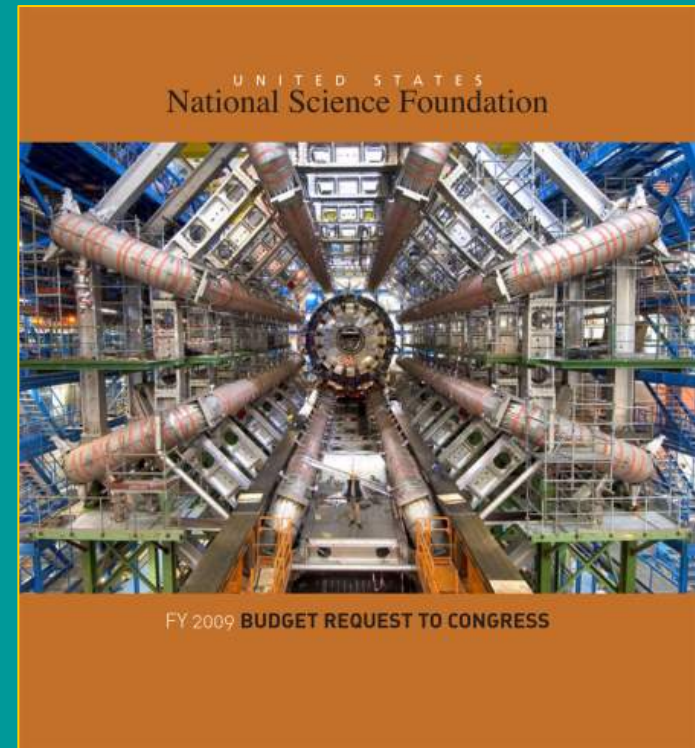


# The Big Picture

## NSF FY 2009 Budget

TOTAL: \$6.85 billion

Increase: 13%





## FY 2009 Budget Request by Appropriations Account (millions)

Appropriations Account	FY 2009 Request	Change from FY 2008	
<b>Research &amp; Related Activities</b>	<b>\$5,593.99</b>	<b>\$772.52</b>	<b>+16.0%</b>
<b>Education &amp; Human Resources</b>	<b>\$790.41</b>	<b>\$64.81</b>	<b>+8.9%</b>
<b>Major Research Equipment &amp; Facilities Construction</b>	<b>\$147.51</b>	<b>-\$73.23</b>	<b>-33.2%</b>
<b>Agency Operations &amp; Award Management</b>	<b>\$305.06</b>	<b>\$23.27</b>	<b>+8.3%</b>
<b>National Science Board</b>	<b>\$4.03</b>	<b>\$0.06</b>	<b>+1.5%</b>
<b>Inspector General</b>	<b>\$13.10</b>	<b>\$1.67</b>	<b>+14.6%</b>
<b>TOTAL, NSF</b>	<b>\$6,854.10</b>	<b>\$789.10</b>	<b>+13.0%</b>

## FY 2009 Budget Request for Selected Investments (millions)

Program	FY 2009 Request
Science & Engineering Beyond Moore's Law	\$20
Adaptive Systems Technology	\$15
Dynamics of Water Processes in the Environment	\$10
Cyber-Enabled Discovery & Innovation	\$100
Major Research Instrumentation	\$115
Science & Technology Centers	\$76

## FY 2009 Budget Request by National Science & Technology Council (NSTC) Crosscut (millions)

NSTC Program	FY 2009 Request	Change from FY 2008	
U.S. Climate Change Science Program	\$221	\$15	+7%
National Nanotechnology Initiative	\$397	\$8	+2%
Networking & Information Technology R&D	\$1,090	\$159	+16%

## FY 2009 Budget Request compared to Congressional Marks by Appropriations Account (millions)

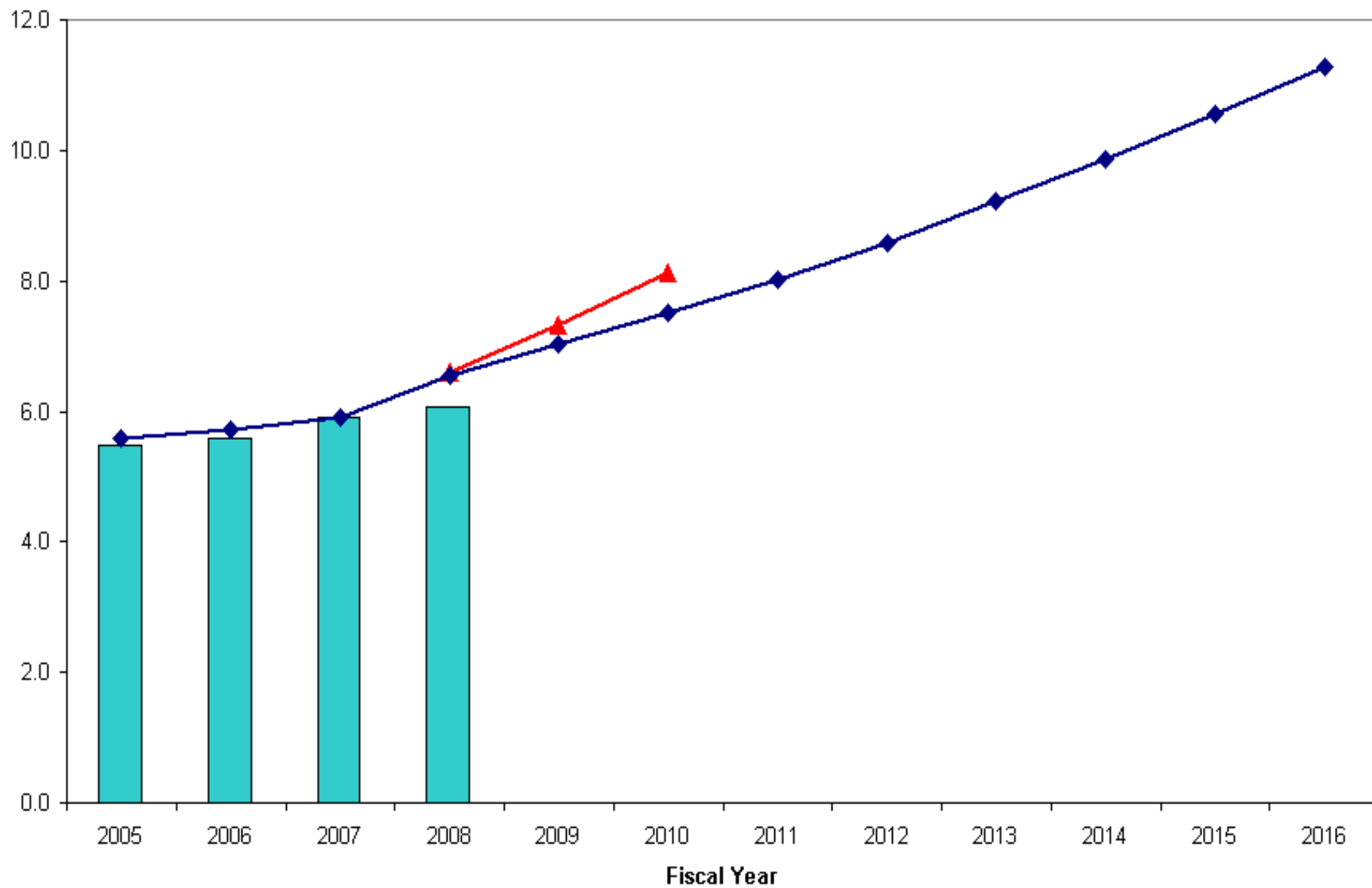
Appropriations Account	FY 2009 Request	House Mark	Senate Mark
Research & Related Activities	\$5,593.99	-\$49.85	\$-.--
Education & Human Resources	\$790.41	+\$49.85	\$-.--
Major Research Equipment & Facilities Construction	\$147.51	\$-.--	+\$4.50
Agency Operations & Award Management	\$305.06	\$-.--	-\$4.50
National Science Board	\$4.03	\$-.--	\$-.--
Inspector General	\$13.10	\$-.--	\$-.--
TOTAL, NSF	\$6,854.10	\$-.--	\$-.--

## FY 2008 Appropriation and FY 2009 Request by Directorate (millions)

Directorate	FY 2008 Appropriations	FY 2009 Request
Biological Sciences	\$612.26	\$675.06
Computer & Information Science & Engineering	\$535.12	\$638.76
Engineering	\$639.54	\$ 759.33
Geosciences	\$755.81	\$ 848.67
Mathematical & Physical Sciences	\$1,170.80	\$ 1,402.67
Social, Behavioral & Economic Sciences	\$215.08	\$ 233.48
Office of Cyberinfrastructure	\$185.18	\$220.08
Office of International Science & Engineering	\$41.32	\$47.44
Office of Polar Programs	\$445.72	\$490.97
Integrative Activities	\$241.17	\$276.00
U.S. Arctic Research Commission	\$1.47	\$1.53
Education & Human Resources	\$765.60	\$790.41

## Recent and Outyear Authorized NSF Funding

\$ in Billions



NSF Appropriations    America COMPETES Act    American Competitiveness Initiative

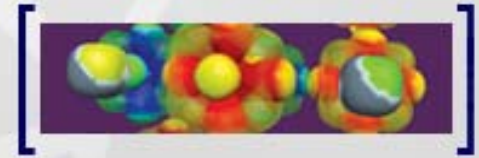
# FY 2009 Outcomes

- Who knows?
- CR through March 6
- Congressional action in February will likely be impacted by outcomes of the November elections
- FY 2010 budget request will be submitted by next President – maybe ~ April, 1, 2009





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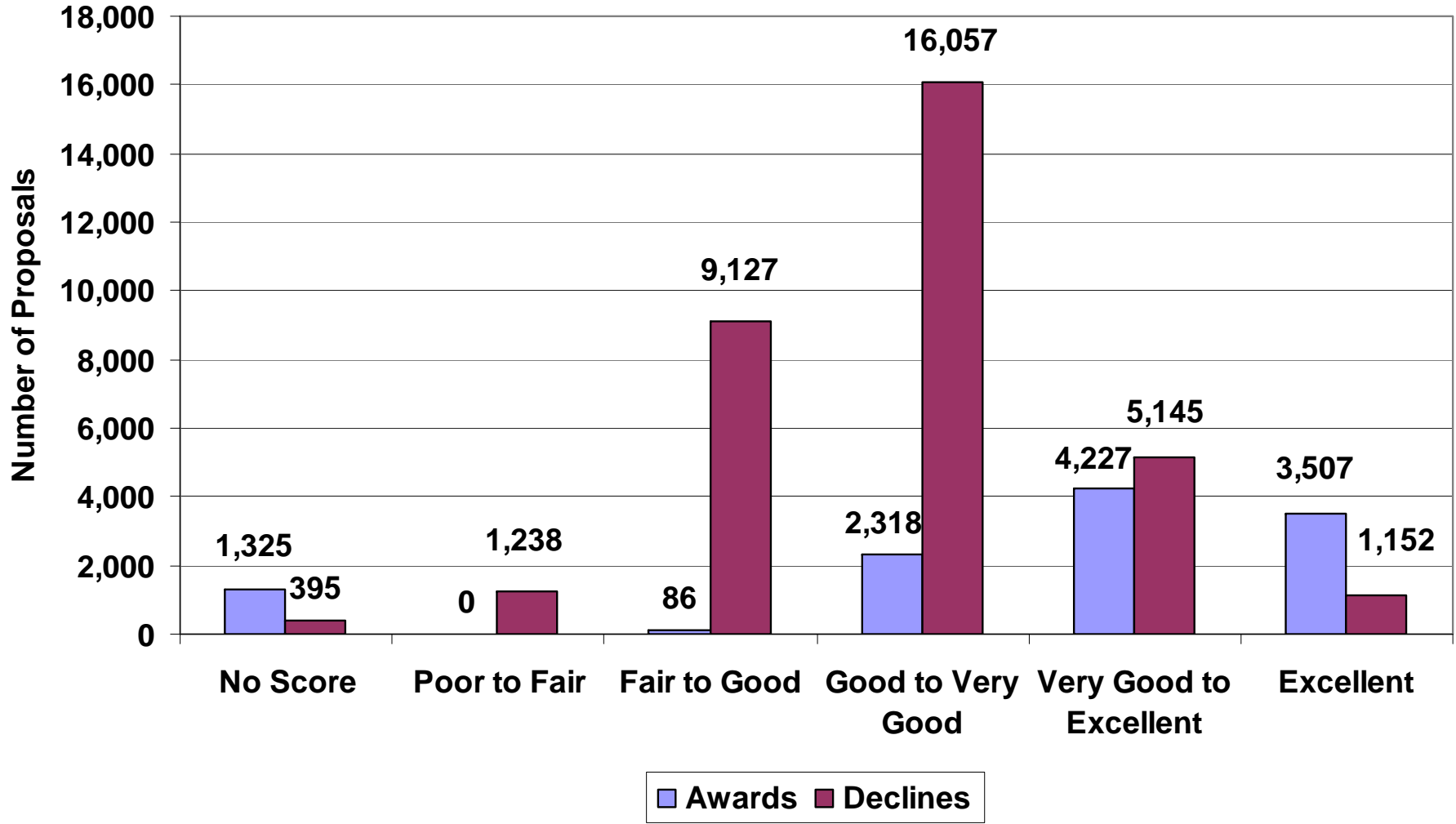


# Current Proposal, Award & Funding Trends



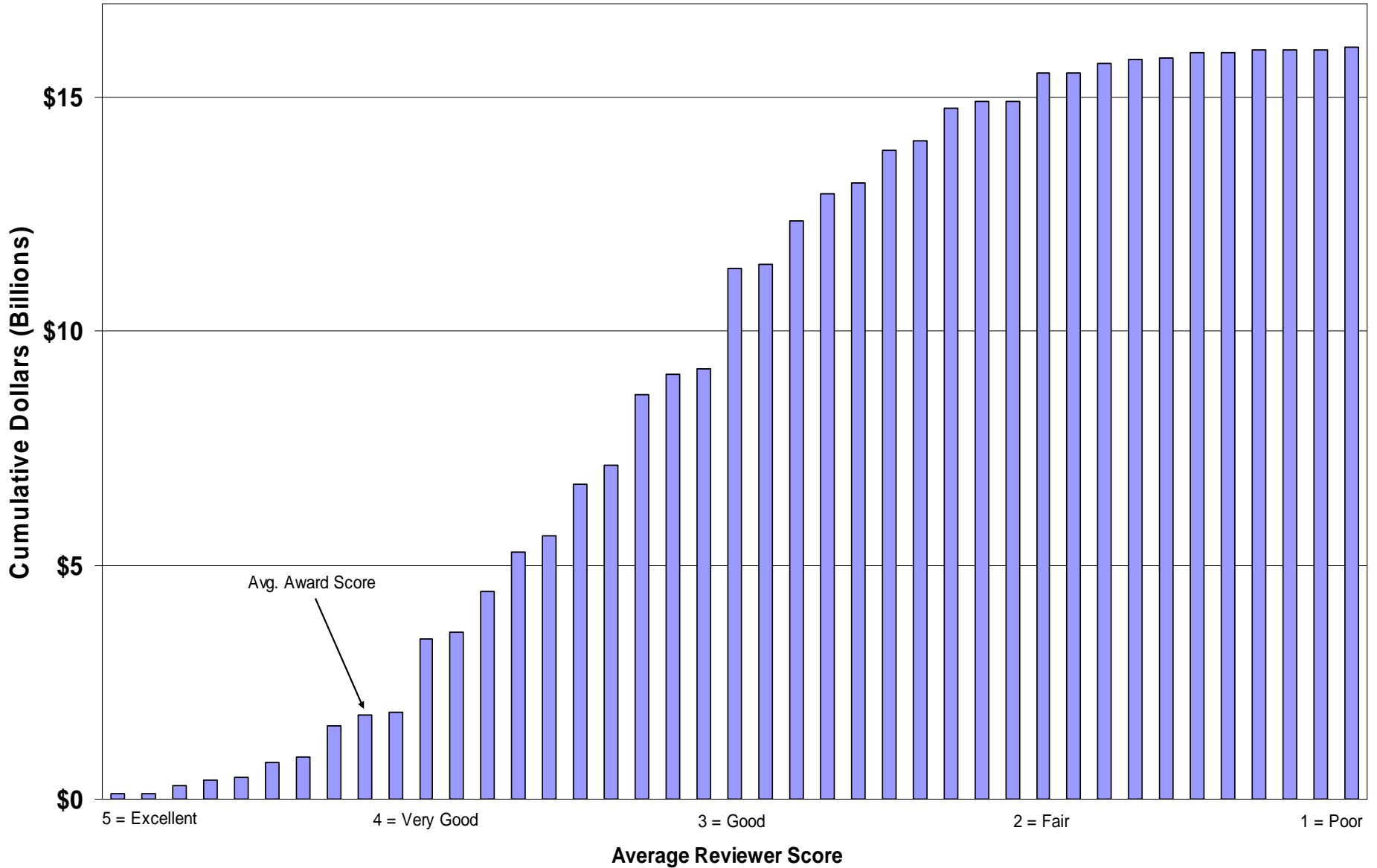
# Distribution of Average Reviewer Ratings

FY 2007

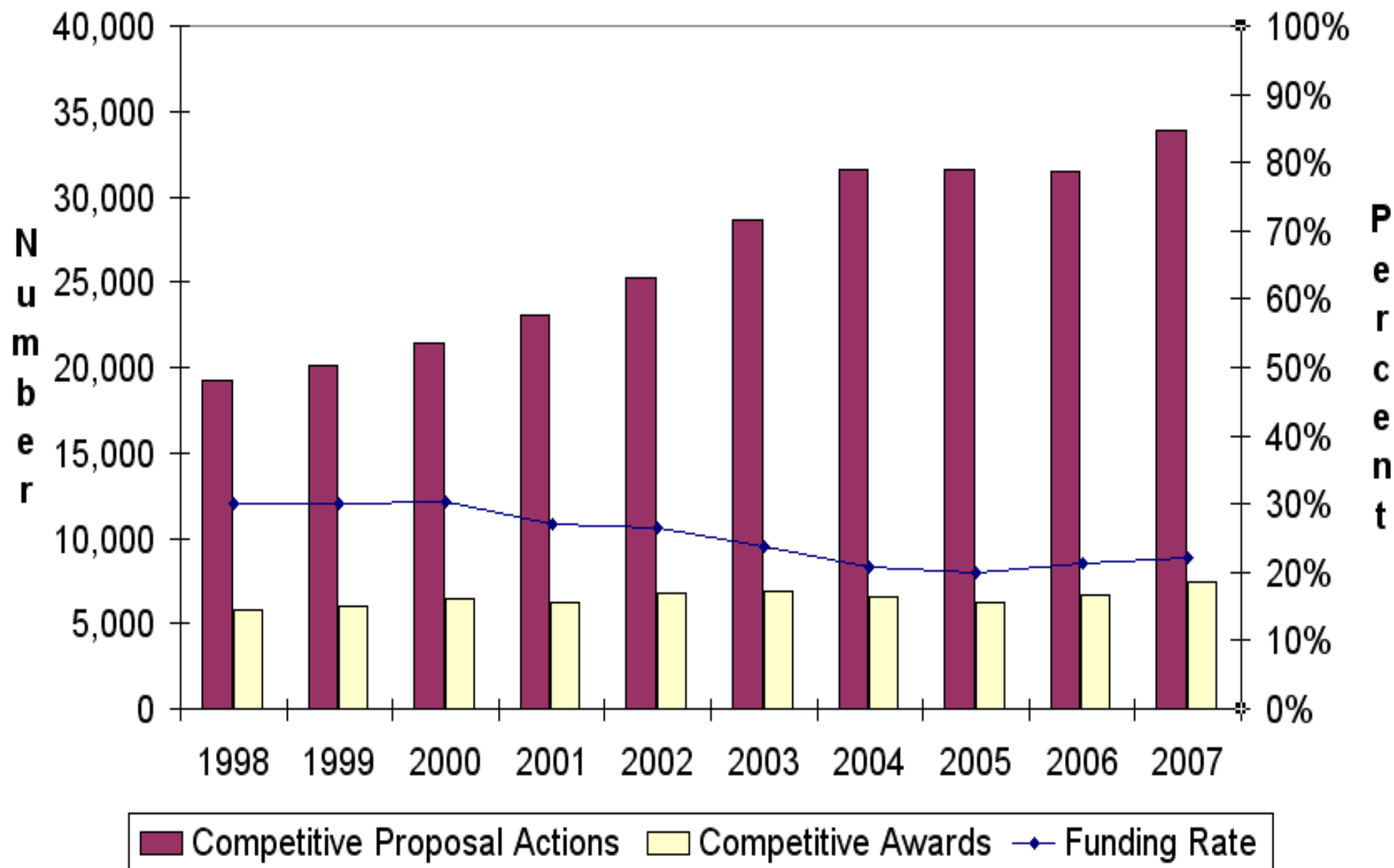


Number of Proposals: 33,114 Declines, 11,463 Awards

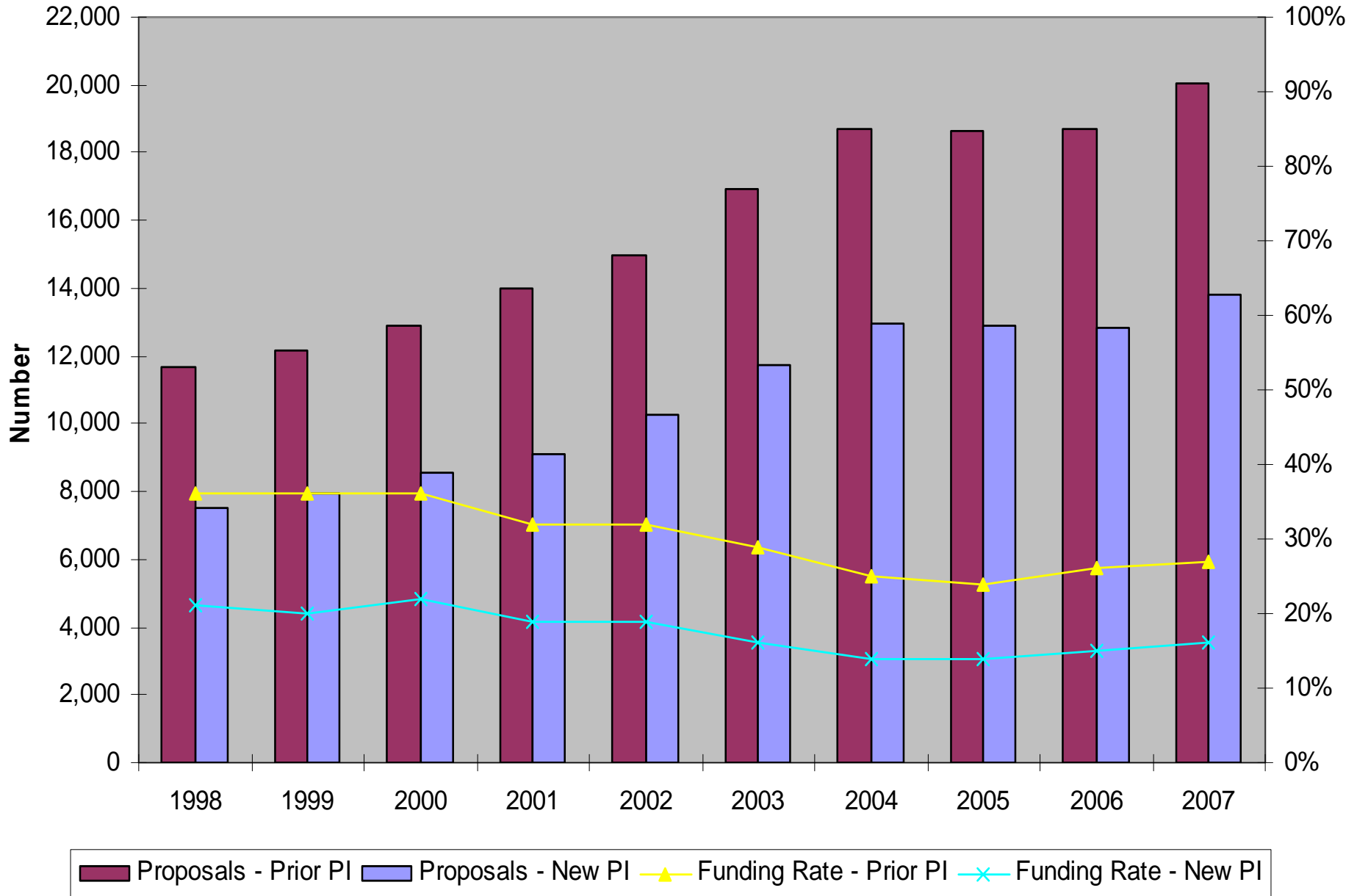
# Cumulative Requested Amounts for Declined Proposals by Average Reviewer Score for FY 2007



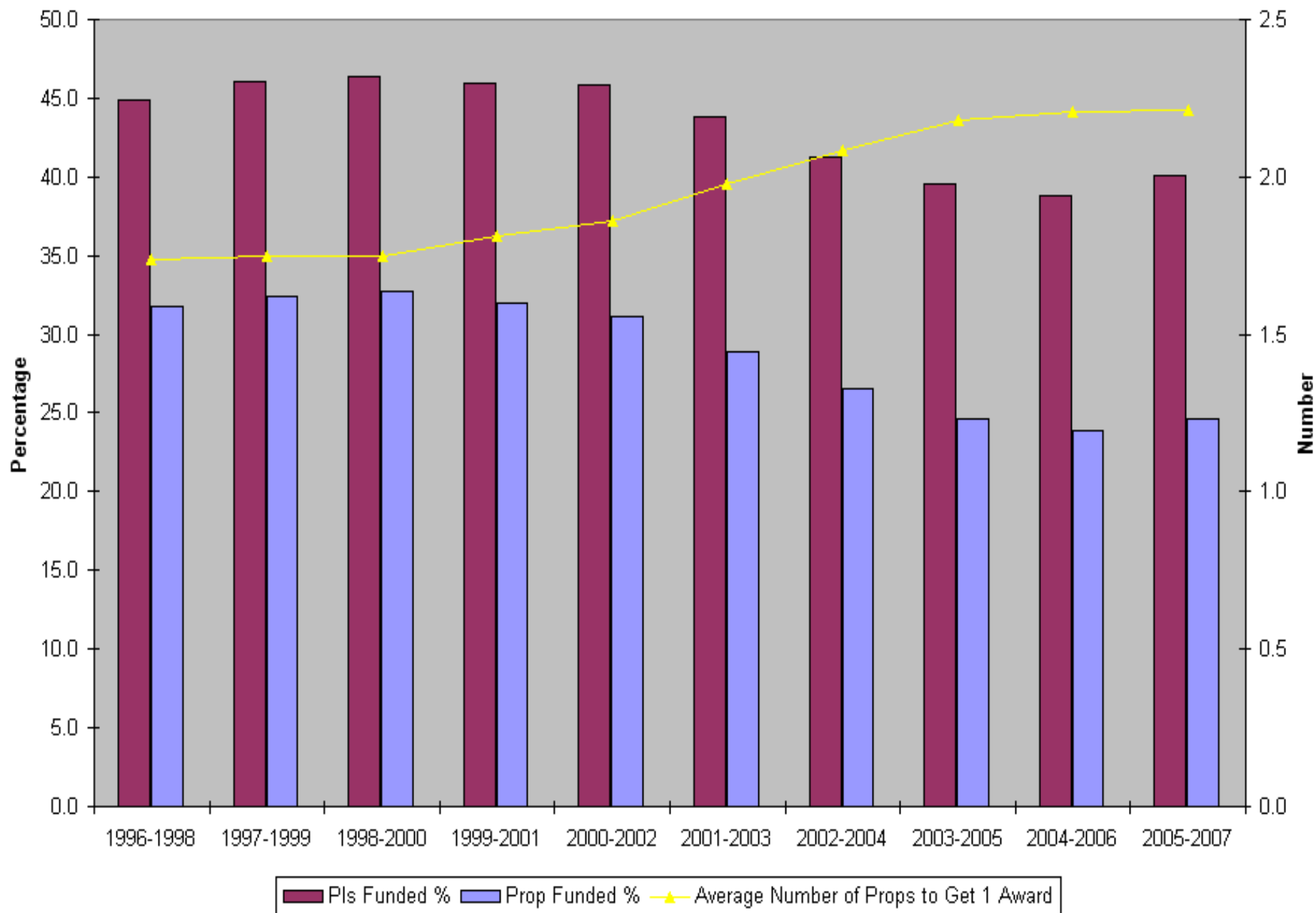
# NSF Funding Rate for Competitive Awards - Competitive Research Grants



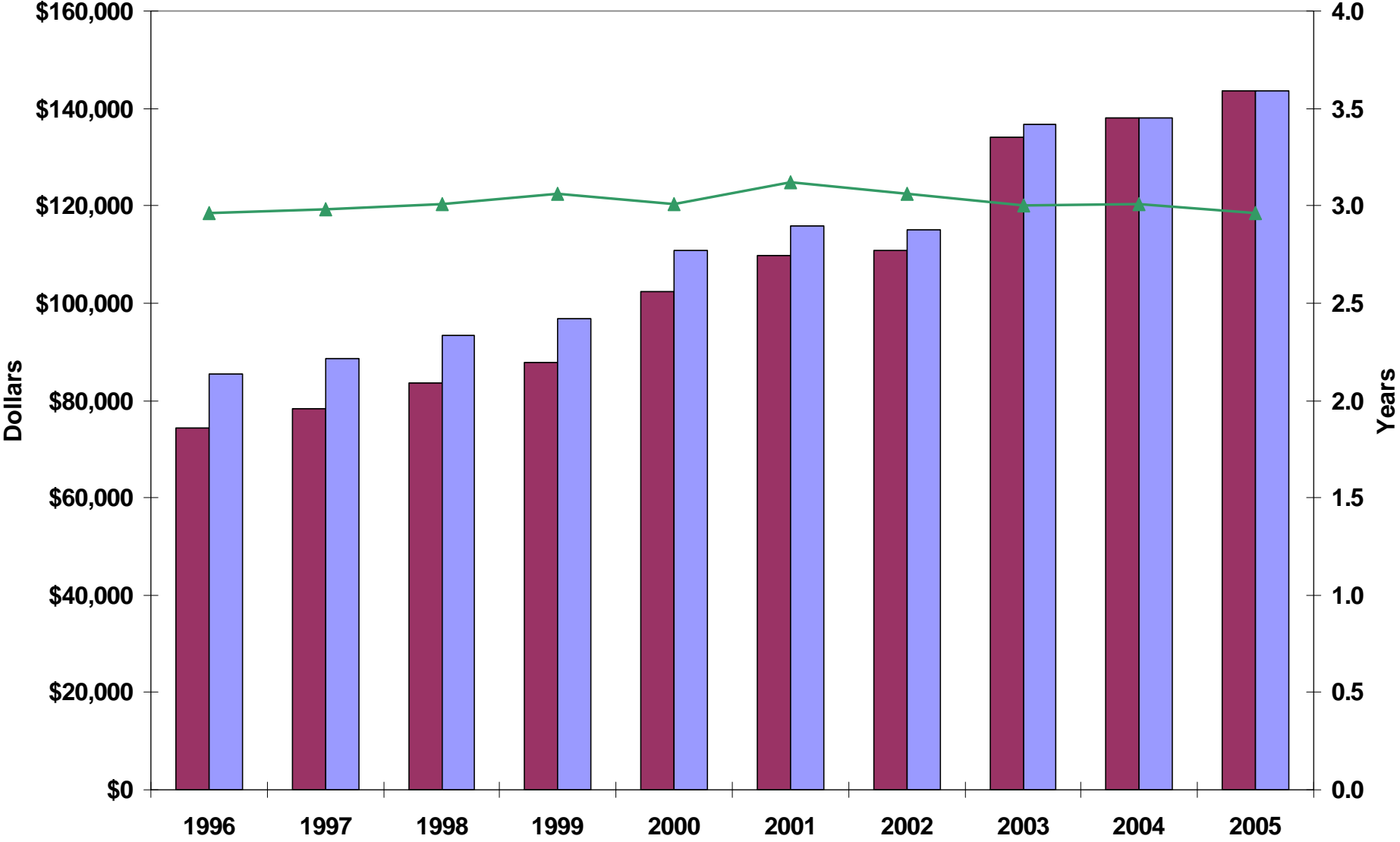
# Research Grant Proposals by PI Type



## PI vs. Proposal Funding Rate - Research Grants Based on 3-Year Intervals



# NSF Competitive Award Size and Duration - Research Grants



\*Based on estimated 2003-2004 Deflator

■ Ann Mean Current \$   
 ■ Ann Mean Constant \$   
 ▲ Mean Duration

# Key Documents

- **FY 2008 NSF Budget Appropriation**
  - [http://www.nsf.gov/about/congress/110/highlights/cu08\\_0108.jsp](http://www.nsf.gov/about/congress/110/highlights/cu08_0108.jsp)
- **FY 2009 NSF Budget Request**
  - <http://www.nsf.gov/about/budget/fy2009/index.jsp>
- **Proposal & Award Policies & Procedures Guide**
  - [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=papp](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=papp)
- **Science and Engineering Indicators**
  - <http://www.nsf.gov/statistics/seind08/>
- **When in doubt:**
  - <http://www.nsf.gov/>

