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The Coming Challenges in Defense Planning, Programming and Budgeting

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Contents

Overview

This brief is a part of series prepared by the Burke Chair in Strategy on current issues in defense budgeting and strategy. Other briefs within this series include,

- "'Unplanning' for Uncertainty"
- "The Uncertain Costs of War(s)"
- "The Macroeconomics of US Defense Spending"

This particular brief is divided into seven main sections, preceded by "Overview" and "Key Challenges" sections which aggregate the salient issues raised throughout the brief. The brief focuses on the budgeting and planning challenges the Department of Defense (DOD) faces as it enters FY 2011. The seven sections following the prefatory sections contain the bulk of the analysis on the budgeting and planning challenges the DOD faces. This brief draws upon research and data provided by the DOD, the Center for Strategic and Budgetary Assessments (CSBA), the Congressional Budget Office (CBO), the Government Accountability Office (GAO), as well as a number of other sources.

The first section gives a brief overview of key features of the DOD's FY 2011 Budget Request as well as a summary of budget changes since FY 2010. This brief's research reveals the FY 2011 base budget is structurally very similar to the FY 2010 base budget. Relative to FY 2010, the Military Personnel, Operations and Maintenance (O&M), and Procurement titles have increased slightly, while funding for RDT&E has decreased slightly. Funding for Military Construction, Family Housing, and Revolving and Management Funds titles have decreased significantly relative to their FY 2010 levels.

The total request for the base budget has also changed only marginally: the FY 2011 total base budget sees only a 3.4% or approximately $18 billion increase over FY 2010 levels (Slides 11-14). Likewise, OCO Funding has not changed materially since FY 2010 (Slide 15). Slides 16-23 contain a further breakdown of the FY 2011 Budget Request by title.

Overview

The second section discusses projected trends for future Defense spending. This section arrives at four key conclusions:

- First, DOD funding has nearly doubled in real terms since Clinton Era lows (Slide 25).
- Second, this funding growth is both due to war costs and to growth in the Base Defense budget (Slides 25-26).
- Third, according to DOD and CBO projections, Defense spending may decrease significantly in FY 2012, followed by a slow, gradual long-term growth (Slides 26-27).
- Fourth, these projections, however, may be unrealistic as DOD and CBO estimates are typically predicated upon assumptions of reduced activity levels in Iraq and Afghanistan. Depending upon future conditions on the ground, especially in Afghanistan, as well as domestic political will, current activity levels may be sustained or even increased in the near-term (Slide 27).

The remaining sections analyze the causal factors behind Defense spending growth.

The third section (Slides 32-35) focuses specifically on cost escalation in Operations and Maintenance (O&M). This section raises three salient issues:

- First, the DOD tends to underestimate O&M costs.
- Second, further growth in O&M costs could "crowd-out" other titles within the Pentagon's budget in the coming years.
- Third, unpredictability of future war costs renders accurately predicting future O&M costs highly challenging.

The fourth section looks into the some of the costs associated with the high Operations Tempo (OPTEMPO) associated with current Overseas Contingency Operations (OCO) and arrives at two key points:

- First, sustaining a high OPTEMPO of OCO for roughly a decade has placed immense strain on both troops and on material, rendering "reset" more and more expensive as OCO continues and the OPTEMPO remains high (Slide 37). Consequently, Defense O&M costs are likely to remain high and potentially increase even as Defense funding is projected to decelerate.
- Second, the sustained high OPTEMPO has and will continue to result in many shadow costs not planned for at the time annual budget requests are assembled (Slide 38).

Overview

The fifth section explores the reasons for the recent, drastic increase in per troop costs and its implications for Defense manpower affordability. The DOD has seen an essentially static end strength in active duty military personnel since 1990 (Slides 40-41). However, O&M and per soldier military personnel costs have risen continuously and quickly, even after accounting for "temporary" costs associated with war (Slides 42-44). CSBA analysis holds that per troop cost growth is primarily attributable to pay raises, growth in healthcare costs, and expansions of other benefits (46-52).
Per troop cost growth has the potential to threaten Defense strength, as the DOD may not be able to achieve manpower end strength goals (Slides 53-56). Or the DOD may be forced into budgeting dilemmas in which it must select from the lesser of two evils by cutting from one important budget title to fund another (Slides 59-61).

The sixth section analyzes the host of challenges the Pentagon faces in reforming the procurement process and harnessing its procurement funding to successful lymodernize the US military. Many DOD procurement programs still reflect Cold War era acquisition requirements rather than the capabilities needed to execute new missions such as CT, CS and humanitarian operations (Slides 62-63). Moreover, rampant cost growth and long time delays have become the norm for DOD procurement programs (Slides 64-70). In an effort to reduce procurement spending excesses, the Secretary of Defense has cut a number of "unnecessary" programs (Slide 71).

Furthermore, the DOD has often attempted to fudge its way out of procurement problems by cutting RDT&E funding and slipping procurement funding into the outyears (Slides 72-75). In turn, procurement program failures and inefficiencies may lead to reset crises—as the military needs to repair and refit degraded capital—as well as investment crisis—as the military may in the near future find itself without the capabilities it requires to fulfill its missions (Slides 76-86).

The seventh and final section focuses exclusively on a growing concern for Defense budget planners: rising military and veterans' entitlement costs. The armed forces may see extreme cost escalation in the near-term and long-term due to rapid growth in health service costs (Slides 88-94). Health services costs are projected to rise in both real terms and as a percentage of DOD total outlays (Slide 95). Costs associated with veterans' entitlements are also likely to increase as more and more troops both become eligible for and actually utilize veteran's benefits as a result of many years of sustained deployment stress (Slides 96-98).

These costs are mandatory; thus, they have the capacity to crowd-out other titles in the Pentagon's budget. In turn, increasing per soldier costs may force the Pentagon to cut military end strengths, leaving the military less capable of executing manpower intensive Counterinsurgency and humanitarian operations.

Key Challenges for Defense Planning

Key Challenges

- Determining accurate costs for Overseas Contingency Operations (OCO), and budgeting for them appropriately;
- Developing a proper approach, with appropriate long-term cost resources for: Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), and the Global War on Terror (GWOT);
- Planning affordable levels of readiness while funding increases in Operations & Maintenance (O&M) costs originating from OCO "reset" needs paired with demands on military health care;
- Setting affordable goals for restructuring of defense manpower, and dealing with over-deployment, rising mandatory spending, and dependence upon contractors;
- Ending the "liar's contest" in defense procurement and providing an affordable solution to meeting a services-wide need for modernization of equipment in a well-defined strategic framework tied to specific threats and mission priorities;
- Avoiding over-funding entitlements like military healthcare at the cost of underfunding OCO costs.

Key Challenges

- Dealing with the growth of the national debt;
- Balancing national security costs in the face of a major fiscal squeeze in the coming years as "Mandatory" Spending and Entitlement lines on the Federal Budget dramatically increase;
- Creating a meaningful approach to national security not only by approaching all aspects of national security planning holistically but also by weighing options during decision-making on politically entrenched Pentagon programs that may damage political capital.

Key Challenges

- Avoiding over-optimistic budgeting assumptions:
  - The future will be better, as *budgets will grow faster with continued economic growth*;
  - *Investment spending will be able to rise faster as O&M costs grow more slowly*;
  - *Procurement costs will decrease as production rates increase due to a "learning curve"*—weapons manufacturers get more efficient at producing weapons as time elapses—and thus, the procurement process as a whole gets more efficient with time.
- Estimating, accounting for and halting cost escalation in budget titles such as Defense health care and procurement;
- Holding defense contractors responsible for unexpected cost escalation in weapons acquisition programs;
- Reprioritizing weapons acquisition portfolios and strategies to reflect future asymmetric and anti-access threats rather than Cold War threats.

An Overview of the FY 2011 DOD Budget Request

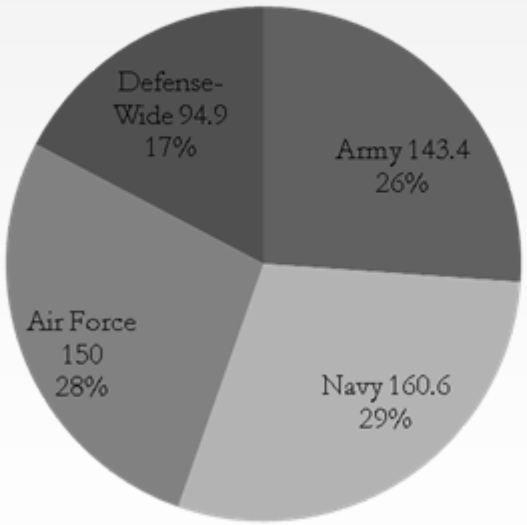
KEY POINTS:

1. The DOD's total budget request has only increased marginally in real terms since FY 2010.
2. The FY 2011 base budget request sees an increase in expenditures on military personnel, O&M and procurement at the cost of all other titles.
3. O&M cost escalation since the beginning of GWOT related operations in 2001 has led to significant increases in per soldier costs, which exceed per DOD civilian costs as of FY 2003.
4. At present, much of this per soldier cost escalation is due to factors related to the high OPTEMPO in Iraq and Afghanistan.

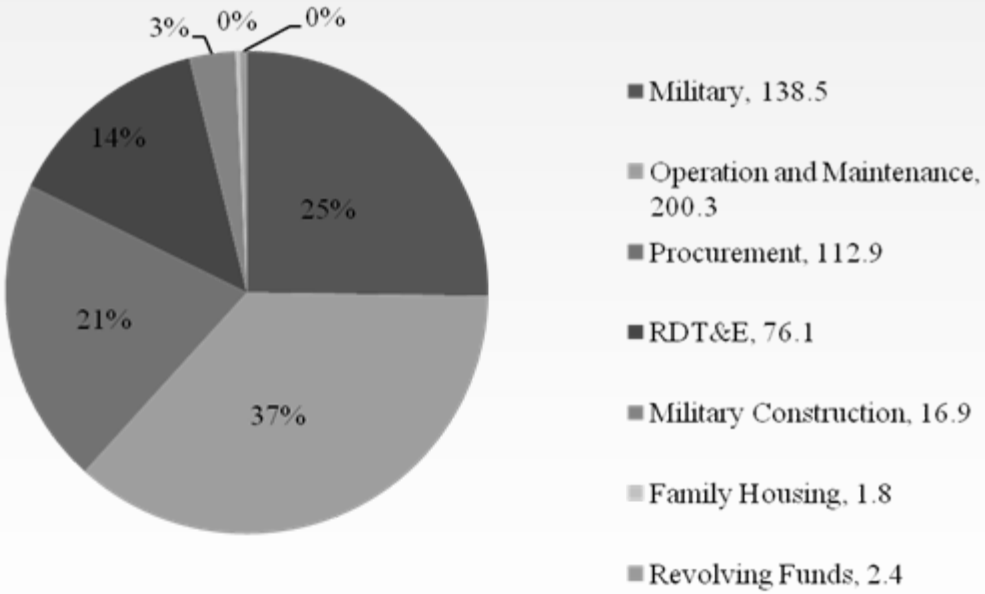
Structural Changes for FY 2011

- No significant changes since FY 2010
- For the most part, the FY 2010 budget request continues the limited rebalancing and reform measures initiated in FY 2011

FY 2011 Requested BA by Department, Total: 530.7 $US Billion

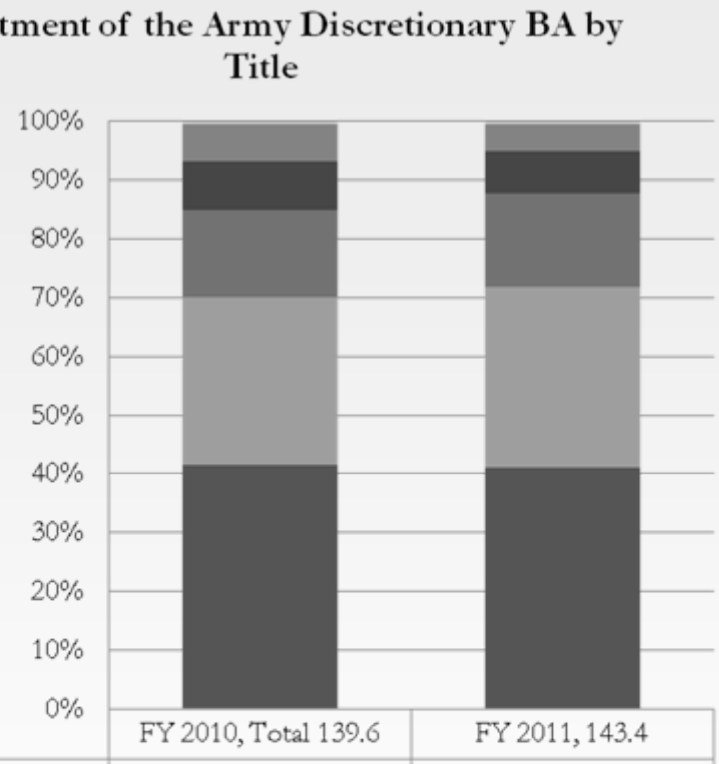


FY 2011 Requested BA by Title, Total: 530.7 $US Billion

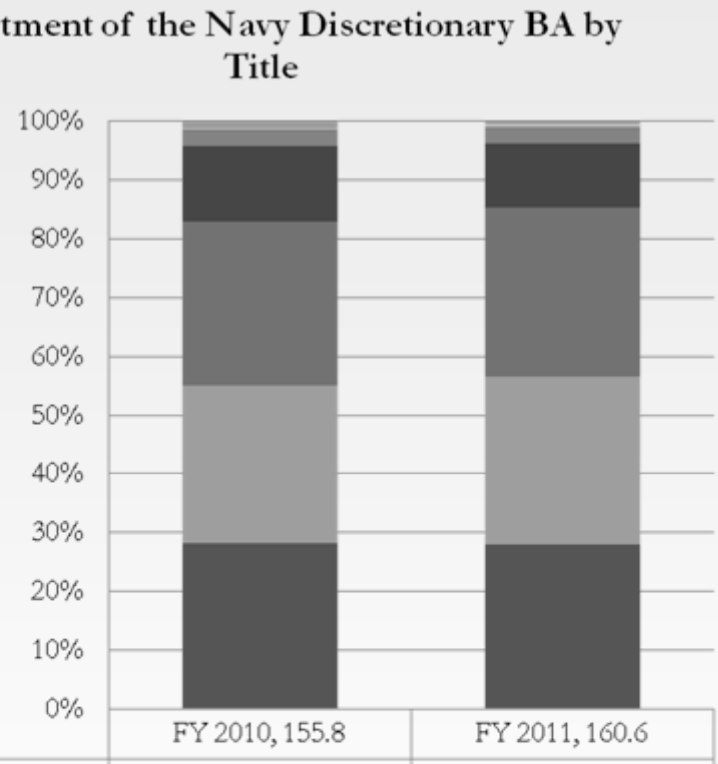


Graphs adapted from; Calculations and observations based upon data found in: Harrison, T. "Analysis of the FY 2010 Defense Budget Request". Washington DC: CSBA. 2009. and US Dept. of Defense. "Fiscal Year 2011 Budget Request: Summary Justifications". Dept of the Comptroller: Washington DC. March 2010.

The FY 2011 Base Budget Request by Service



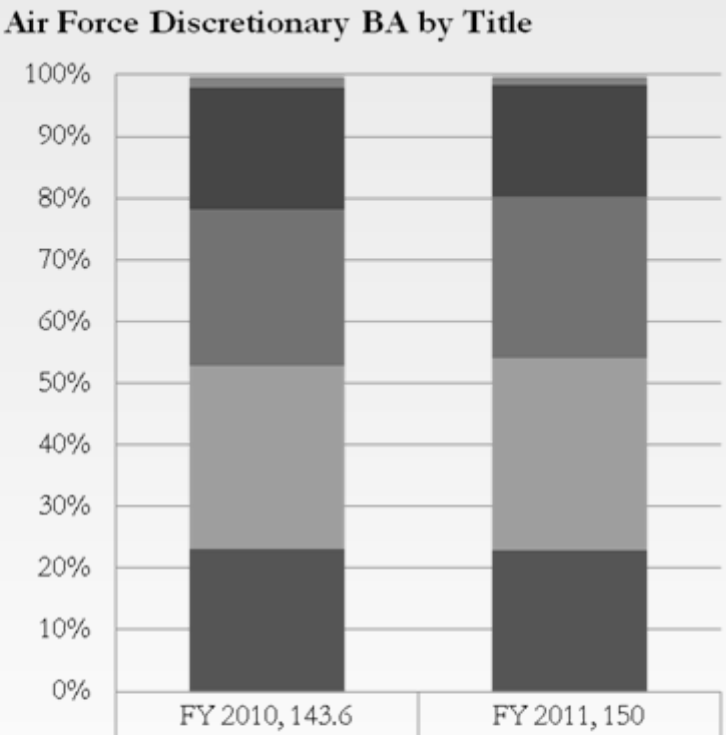
	FY 2010, Total 139.6	FY 2011, 143.4
Revolving Funds	0	0.1
Family Housing	0.8	0.6
Military Construction	8.8	6.5
RDT&E	11.4	10.3
Procurement	20.8	23
Operation and Maintenance	40	43.9
Military Personnel	57.9	59.1



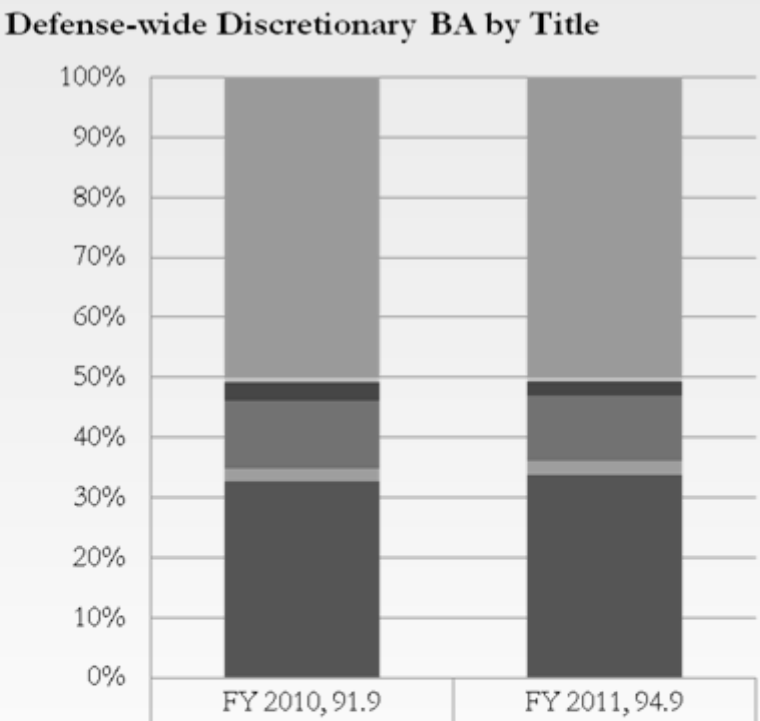
	FY 2010, 155.8	FY 2011, 160.6
Revolving Funds	1.7	0.9
Family Housing	0.5	0.6
Military Construction	4.4	4.4
RDT&E	19.9	17.7
Procurement	43.4	46.2
Operation and Maintenance	42	45.7
Military Personnel	43.9	45.1

Adapted from: US Dept. of Defense. "Fiscal Year 2011 Budget Request: Summary Justifications". Dept of the Comptroller: Washington DC. February 2010. pg. 8-2

The FY 2011 Base Budget Request by Service



	FY 2010, 143.6	FY 2011, 150
Revolving Funds	0.1	0.1
Family Housing	0.6	0.6
Military Construction	2.4	1.7
RDT&E	28.1	27.2
Procurement	36.4	39.3
Operation and Maintenance	42.7	46.6
Military Personnel	33.1	34.4



	FY 2010, 91.9	FY 2011, 94.9
Revolving Funds	91.9	94.9
Family Housing	1.3	1.3
Military Construction	0.4	0.1
RDT&E	5.4	4.2
Procurement	20.7	20.9
Operation and Maintenance	4.2	4.3
Military Personnel	59.9	64.1

Adapted from: US Dept. of Defense. "Fiscal Year 2011 Budget Request: Summary Justifications". Dept of the Comptroller: Washington DC. February 2010. pg. 8-2

FY 2011 Base Budget Request Summary by Appropriation Title

FY 2011 Base Budget

(Dollars in Billions)

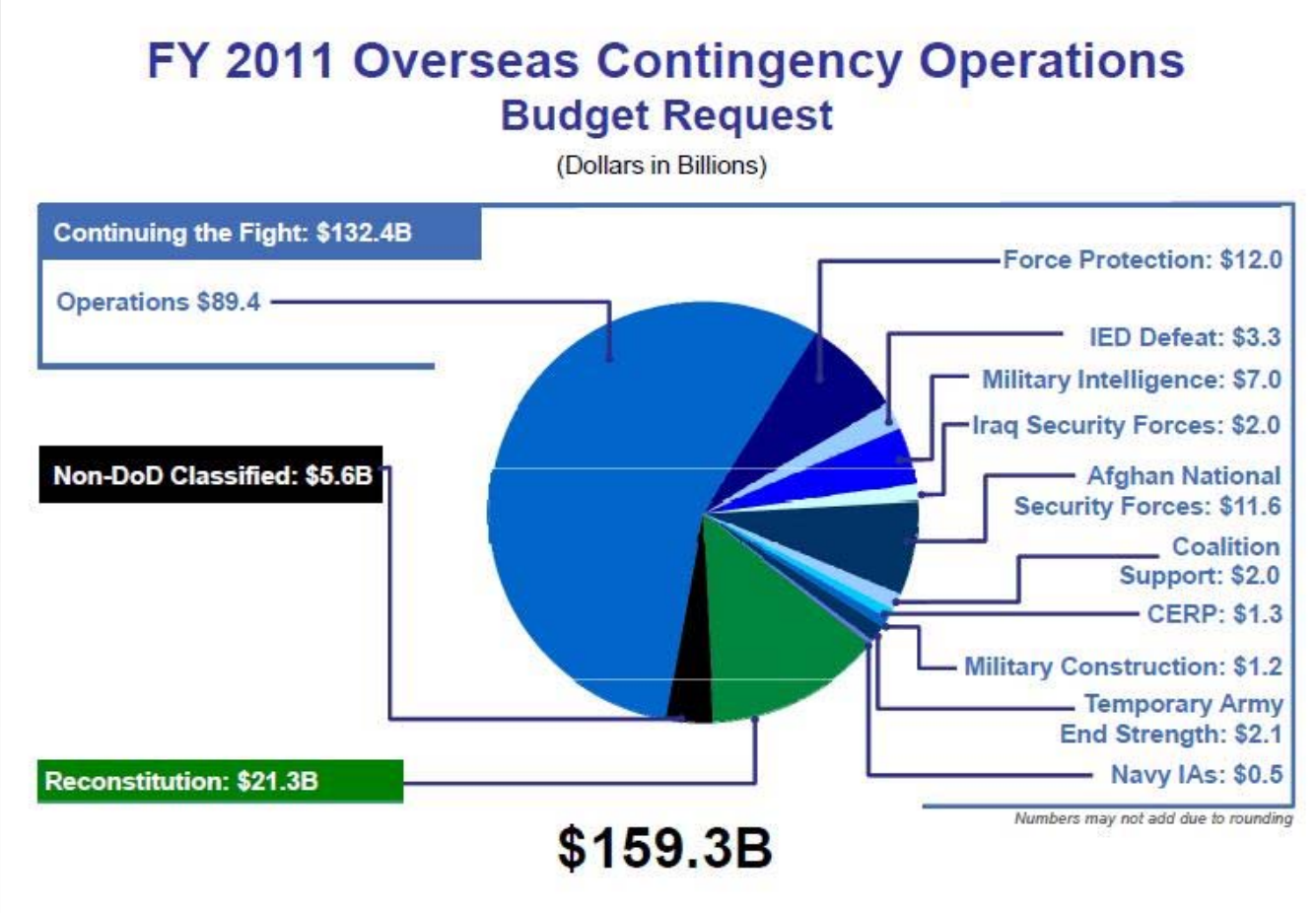
Appropriation Title	FY 2010	FY 2011	Δ FY 2010 – FY 2011
Military Personnel	$135.0	$138.5	+2.6%
Operation and Maintenance	184.5	200.2	+8.5%
Procurement	104.8	112.9	+7.7%
RDT&E	80.1	76.1	-5.0%
Military Construction	21.0	16.9	-19.5%
Family Housing	2.3	1.8	-19.3%
Revolving and Management Funds	3.1	2.4	-23.7%
Total	**$530.7**	**$548.9**	**+3.4%**

Numbers may not add due to rounding

Adapted from: US Dept. of Defense. "Fiscal Year 2011 Budget Request: Summary Justifications". Dept of the Comptroller: Washington DC. Feb 2010.

The FY 2011 Base Budget Request Overview

- FY 2011 OCO funding still placed in supplemental request but submitted alongside FY 2011 budget.
- FY 2011 OCO supplemental request significantly larger than FY 2010 OCO funding request, suggesting the DOD is making greater efforts to reduce reliance on mid-year "emergency" funding as per the Administration's request.



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Military Personnel: Title Budget Request FY 2011

Military Personnel Request Synopsis

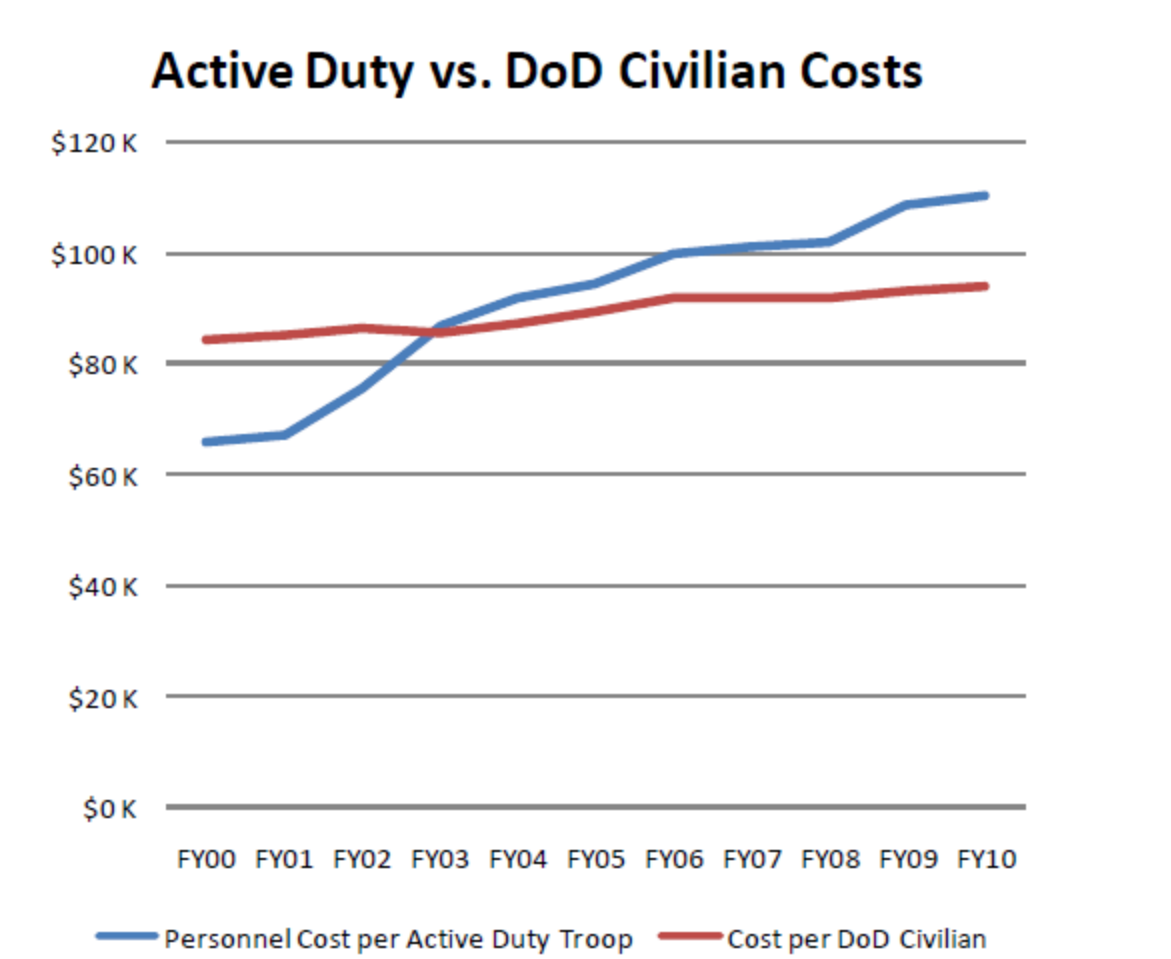
- $139 billion total.
- $104 billion for pay and allowances
- $15.3 billion for Military Personnel involved in OCO
  - → More than 75% of these funds are directed to the Army

Analysis of Military Personnel Increases—Sources of Budget Escalation

- 2.1% increase from FY'10
- End-strength is unchanged from FY '10 at 1,405,000
- Full-time guard and reserve personnel remains nearly constant at 79,000
- Increase of military pay by 1.4%
- Increase of health-care related expenses by 3.4%

Calculations and observations based upon data found in: Harrison, T. "Analysis of the FY 2010 Defense Budget Request". Washington DC: CSBA. 2010.

Military Personnel: Title Budget Request FY 2011



Calculations and observations based upon data found in: Harrison, T. "Analysis of the FY 2010 Defense Budget Request". Washington DC: CSBA. 2010.

Calculations and observations based upon data found in: Harrison, T. "Looking Ahead to the FY 2011 Defense Budget". Washington DC: CSBA. 2010. pgs 6. and US Dept. of Defense. "Fiscal Year 2011 Budget Request: Summary Justifications". Dept of the Comptroller: Washington DC. February 2010.

Operations & Maintenance: Title Budget Request FY 2011

O&M Request Synopsis

- $200 billion of budget authority → $133,000 per active duty service troop, excluding war funding ($210,000 including war funding)
- Per troop costs were at just $64,000 in FY 1990 in preparation for Operation Desert Storm and $95,000 just before invading Afghanistan
- There is an additional $117 billion in O&M budget authority for OCO

Calculations and observations based upon data found in: Harrison, T. "Analysis of the FY 2011 Defense Budget Request". Washington DC: CSBA. 2010. pgs 22.

"Black Operations": Classified Funding in the FY 2011 Budget Request

Overall Trends

•FY 2011 classified procurement funding is at its highest level in real terms since FY 1987
•Increase of 2.8% over FY 2010

Classified Funding Request Synopsis

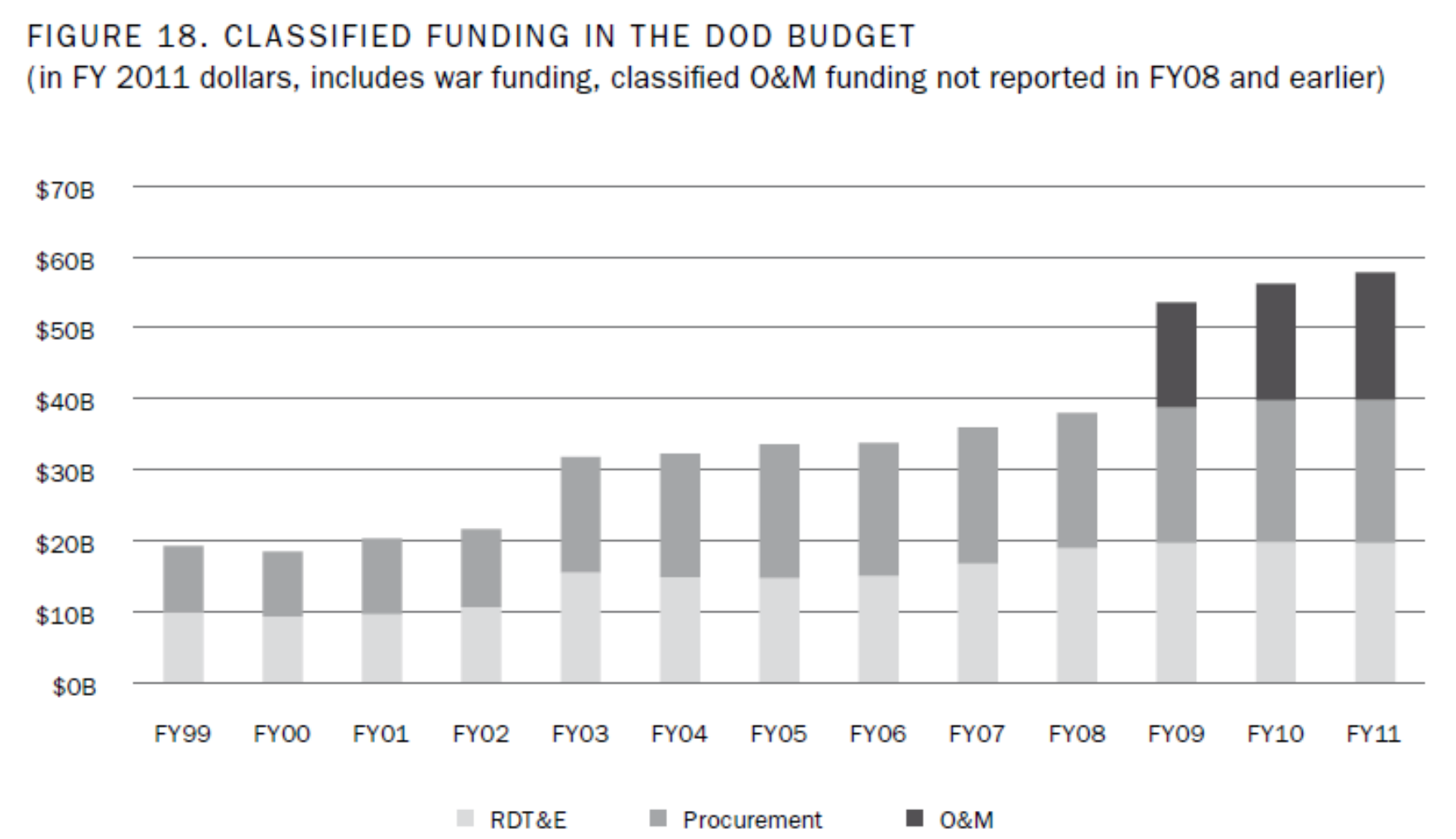
• $57.8 billion in total budget authority (includes OCO)
→ 19% of total acquisition funding in DOD's BA
• $19.4 billion for RDT&E
• Air Force has the highest request (80% of total classified funding)
→ 43% of its procurement request is classified
→ 46% of its RDT&E request is classified

Previous Results of Classified Funding—Mixed Success

• Successful programs include: Corona Satellite Program (1960-72); F-117 Stealth Fighter; B-2 Bomber; and SR-71
• Unsuccessful programs: Future Imagery Architecture Program of next-gen spy satellites—$4 billion loss

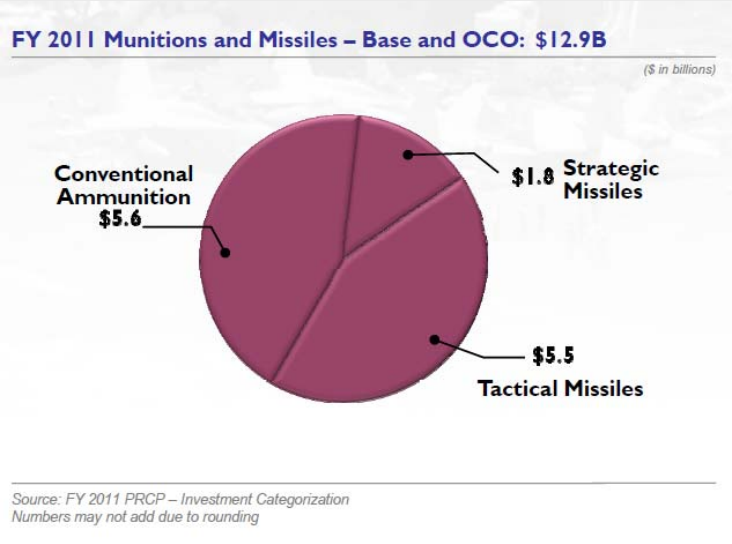
Calculations and observations based upon data found in: Harrison, T. "Classified Funding in the FY 2011 Defense Budget Request". Washington DC: CSBA. 2010.

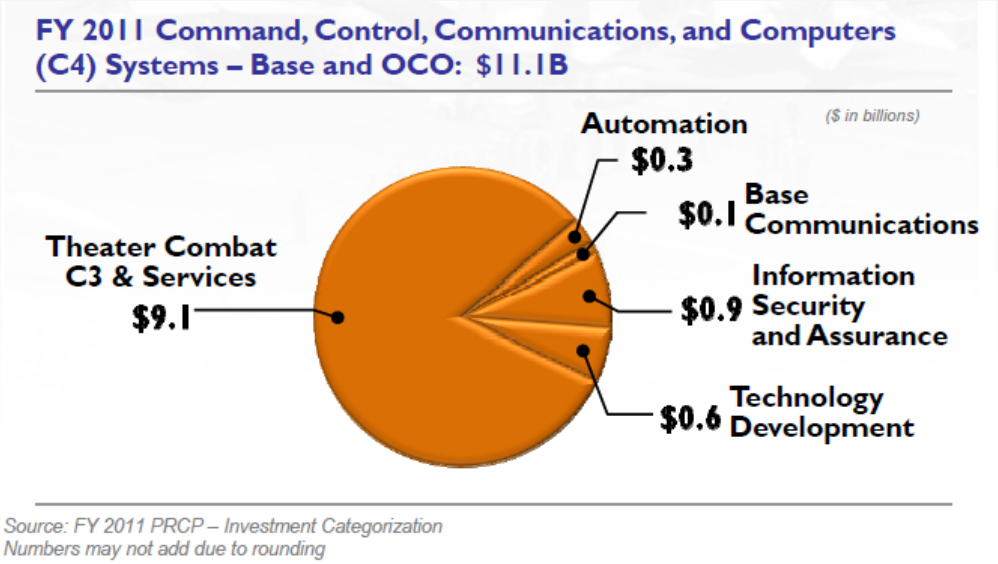
Black Operations: Title Budget Request FY 2011



Graph adapted from Harrison, T. "Classified Funding in the FY 2011 Defense Budget Request". Washington DC: CSBA. 2010.

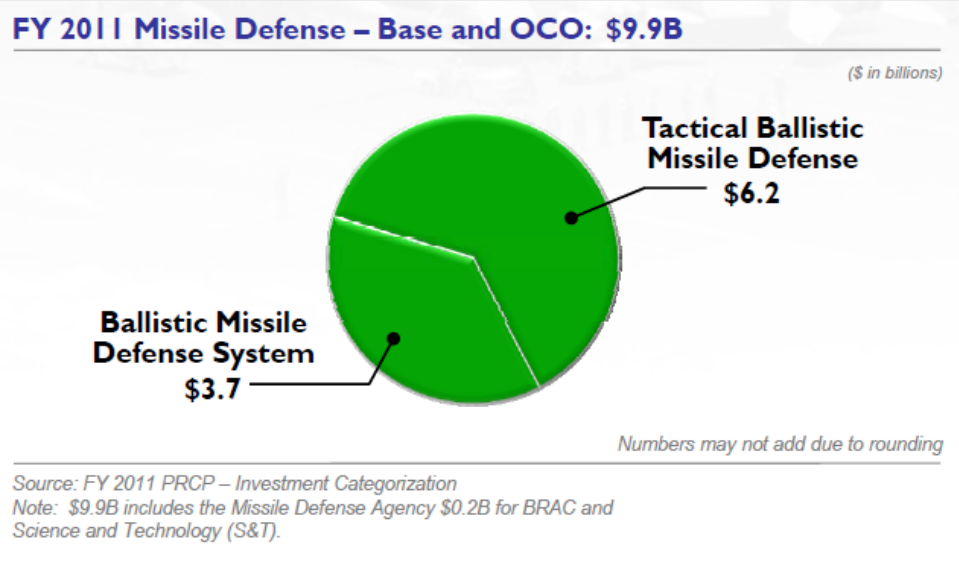
Weapons Systems: Budget Request by Title

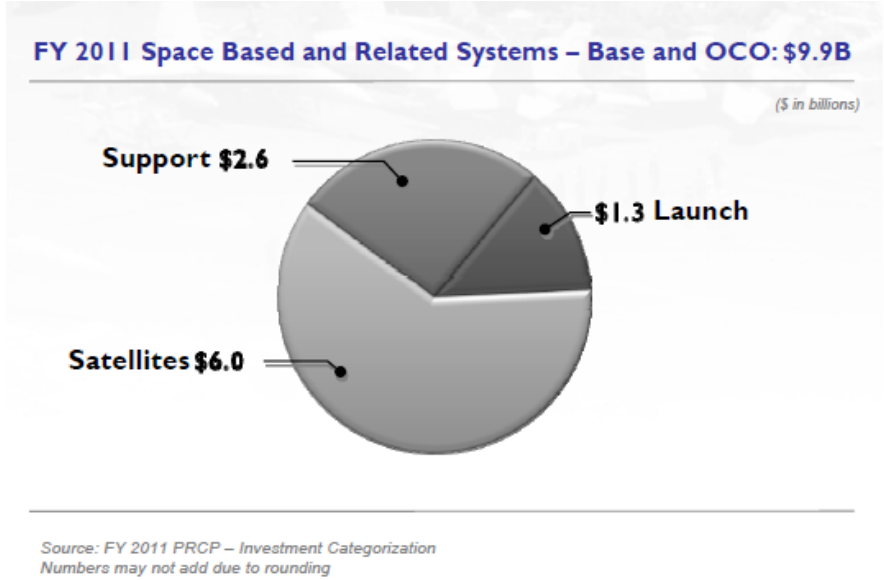




Graphs adapted from: US Dept. of Defense. "Fiscal Year 2011 Budget Request: Summary Justifications". Dept of the Comptroller: Washington DC. February 2010.

Weapons Systems: Budget Request by Title





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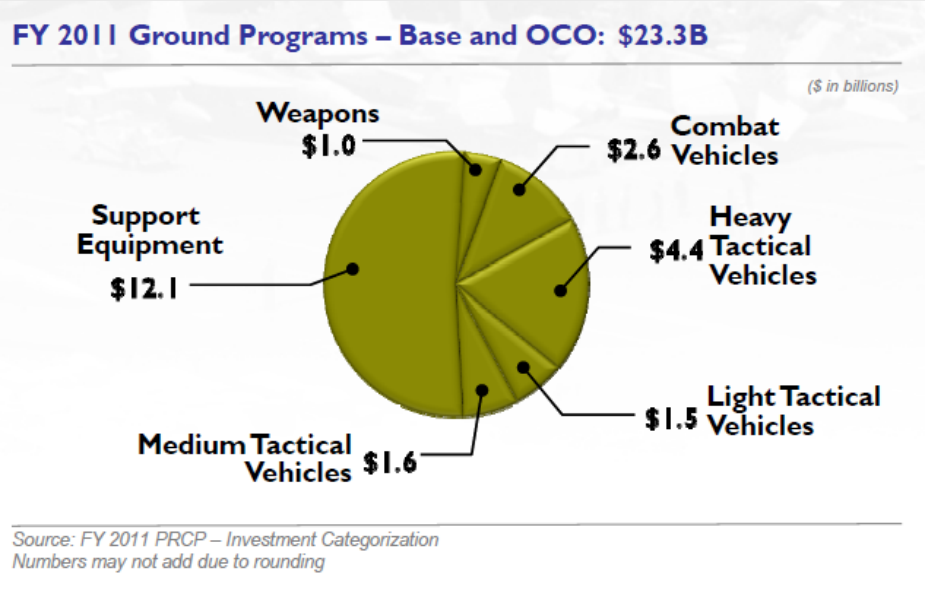
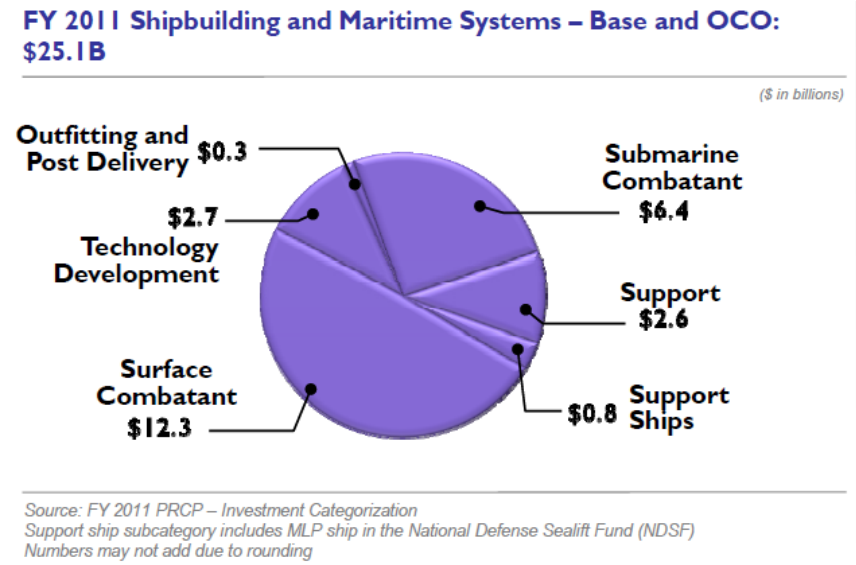




Graphs adapted from: US Dept. of Defense. "Fiscal Year 2011 Budget Request: Summary Justifications". Dept of the Comptroller: Washington DC. February 2010.

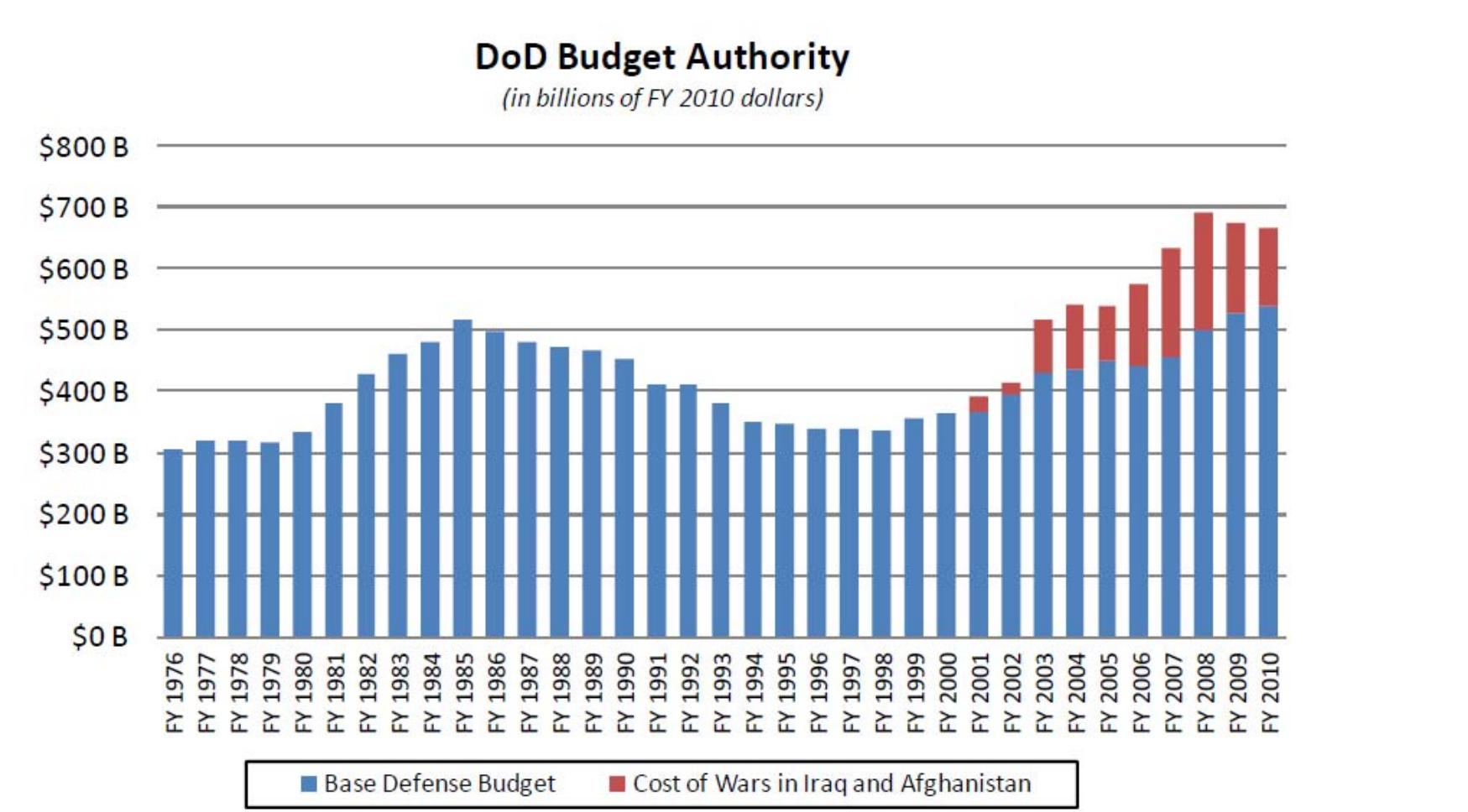
Future DOD Budget Projections

KEY POINTS:

1.DOD funding has nearly doubled in real terms since Clinton Era lows.
2.Funding growth is both due to war costs and to growth in the Base Defense budget.
3.Current DOD and CBO projections of Defense spending for the out years predict a significant decrease in Defense spending in FY 2012, followed by slow, gradual long-term real growth.
4.DOD and CBO projections are predicated on assumptions of reduced activity levels in Iraq and Afghanistan, but do not take into account alternative scenarios in which current activity levels are sustained or even increased.

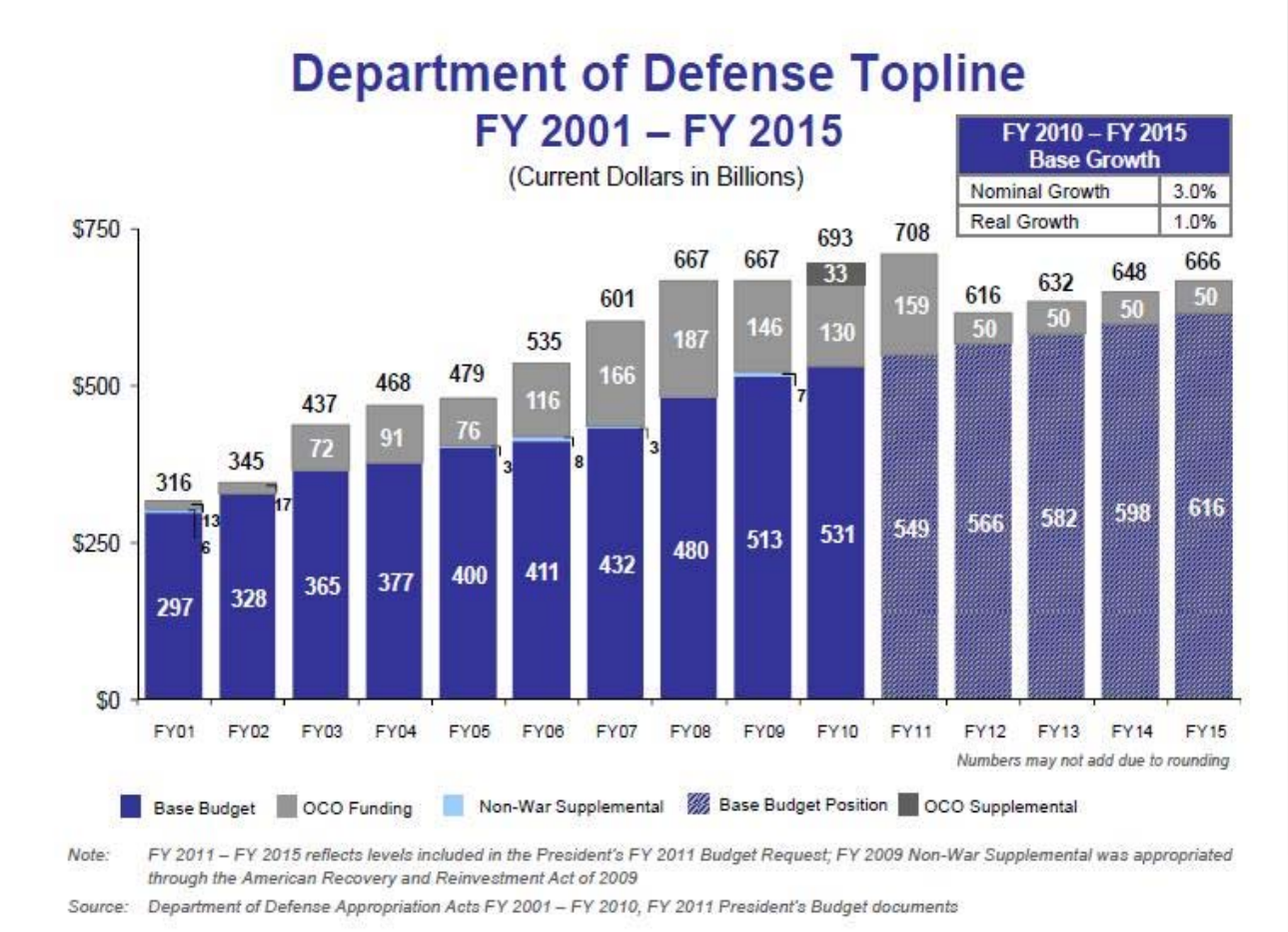
ANALYSIS: DOD and CBO projections of Defense spending in the out years may be unrealistic in practice. The Administration has stated that draw-down and withdrawal of troops from Afghanistan will begin in the summer of 2011, but simultaneously stated that the specifics of such a draw-down are predicated upon the conditions on the ground. Consequently, DOD and CBO projections may potentially understate Defense spending growth and/or overstate the reduction of Defense spending post-Afghan "Surge." Honest evaluations of Defense costs in the out years will be important to the Administration for prioritizing amongst other competing fiscal concerns, such as President Obama's goal of reducing the federal deficit. Moreover, an honest assessment of the Administration's level of time commitment will enable Defense leaders to more intelligently budget for either continued operations in Afghanistan or for contingency operations elsewhere.

DOD Budget Authority Has Nearly Doubled in Real Terms



Graphic adapted from: Harrison, T. "Looking Ahead to the FY 2011 Defense Budget". Washington DC: CSBA. 2010. pgs 4.

DoD "Low Balls" Defense Budget: FY2011-FY2015



Growth in Defense Budgeting:

- FY'00-FY'10: Base budget grew 3.9% per annum.
- FY'11 slowed this growth to 2.3% per annum.
- DOD/POTUS projects future growth rate of base to be only 0.2% per annum.
- Total DOD spending increase FY'10 budget exceeds Regan's peak of $517 billion (current dollars).
- Increased 73% from FY'01-'09.

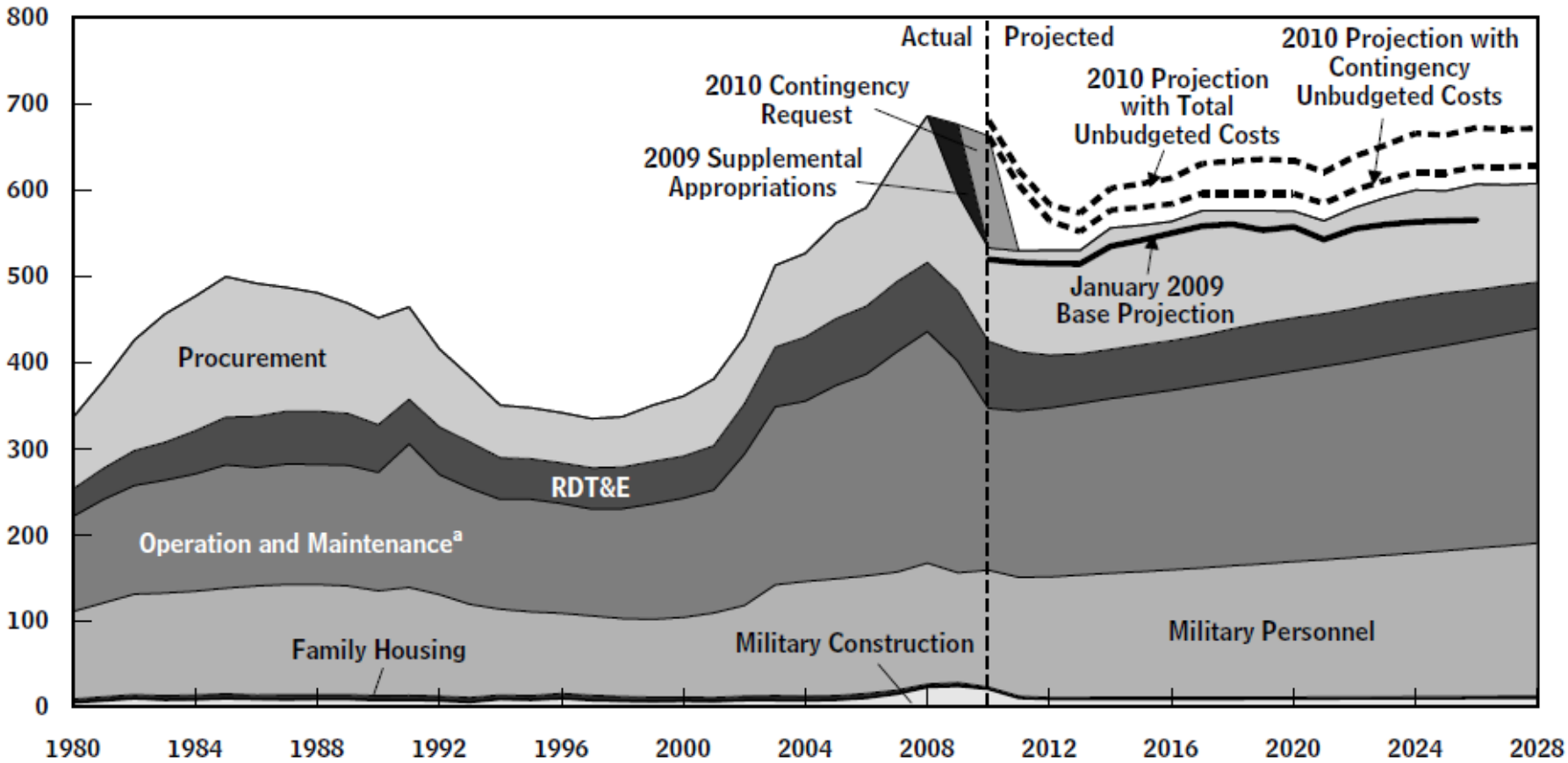
Graph adapted; and, calculations and observations above are based upon data from: Harrison, T. "Few Surprises in the FY 2011 Defense Budget Request". Washington DC: CSBA. 2010. and US Dept. of Defense. "Fiscal Year 2011 Budget Request: Summary Justifications". Dept of the Comptroller: Washington DC. February 2010. pg 2.

CBO Warns Defense Usually Underestimates Costs

Figure 1.

Resources for Defense

(Billions of 2010 dollars)



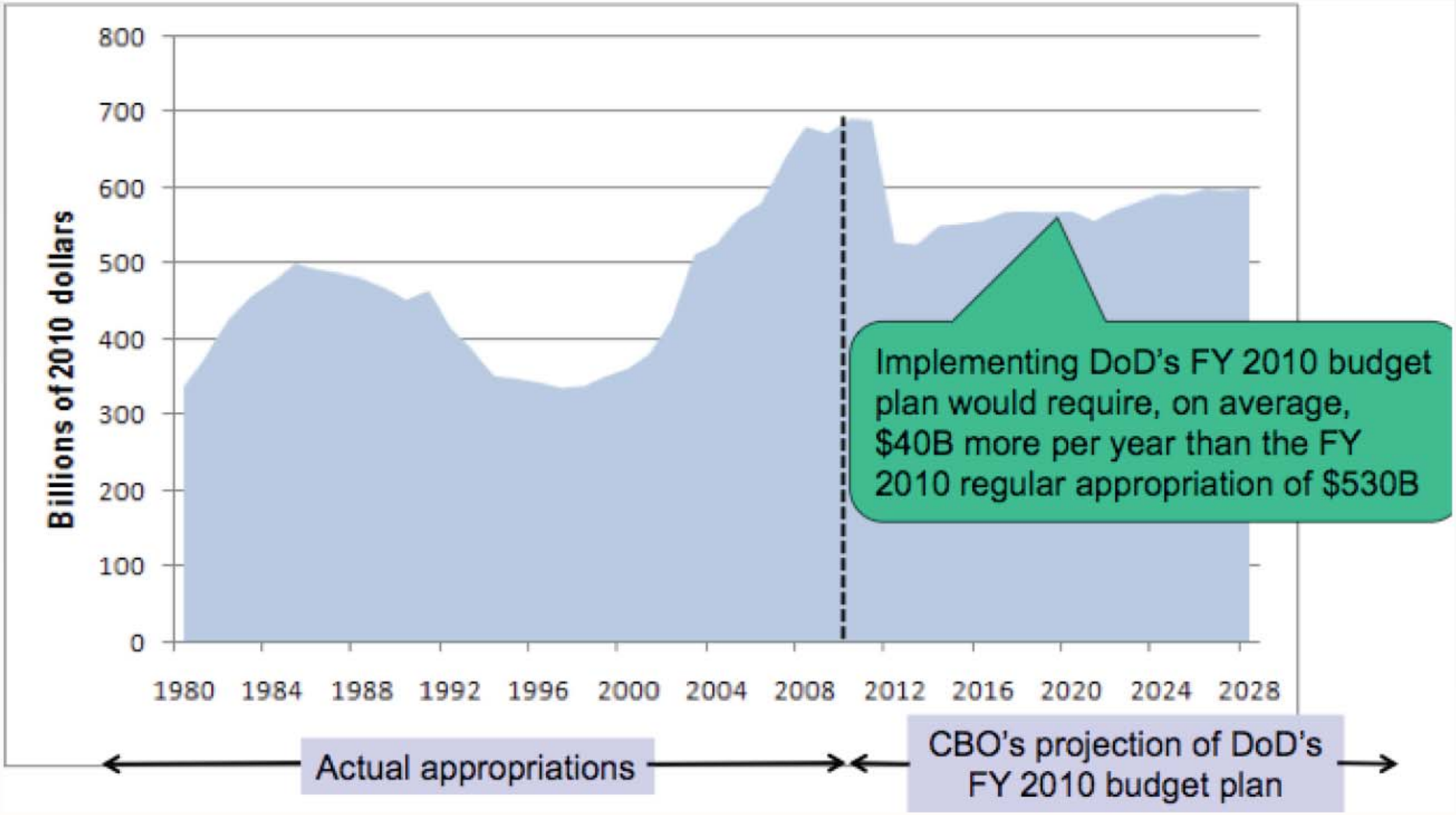
Source: Congressional Budget Office.

Graph adapted from: CBO. *Long-Term Implications of the Fiscal Year 2010 Defense Budget*. January 2010. pg 11.

Current Baseline Budget Requests Won't Meet Real Defense Needs

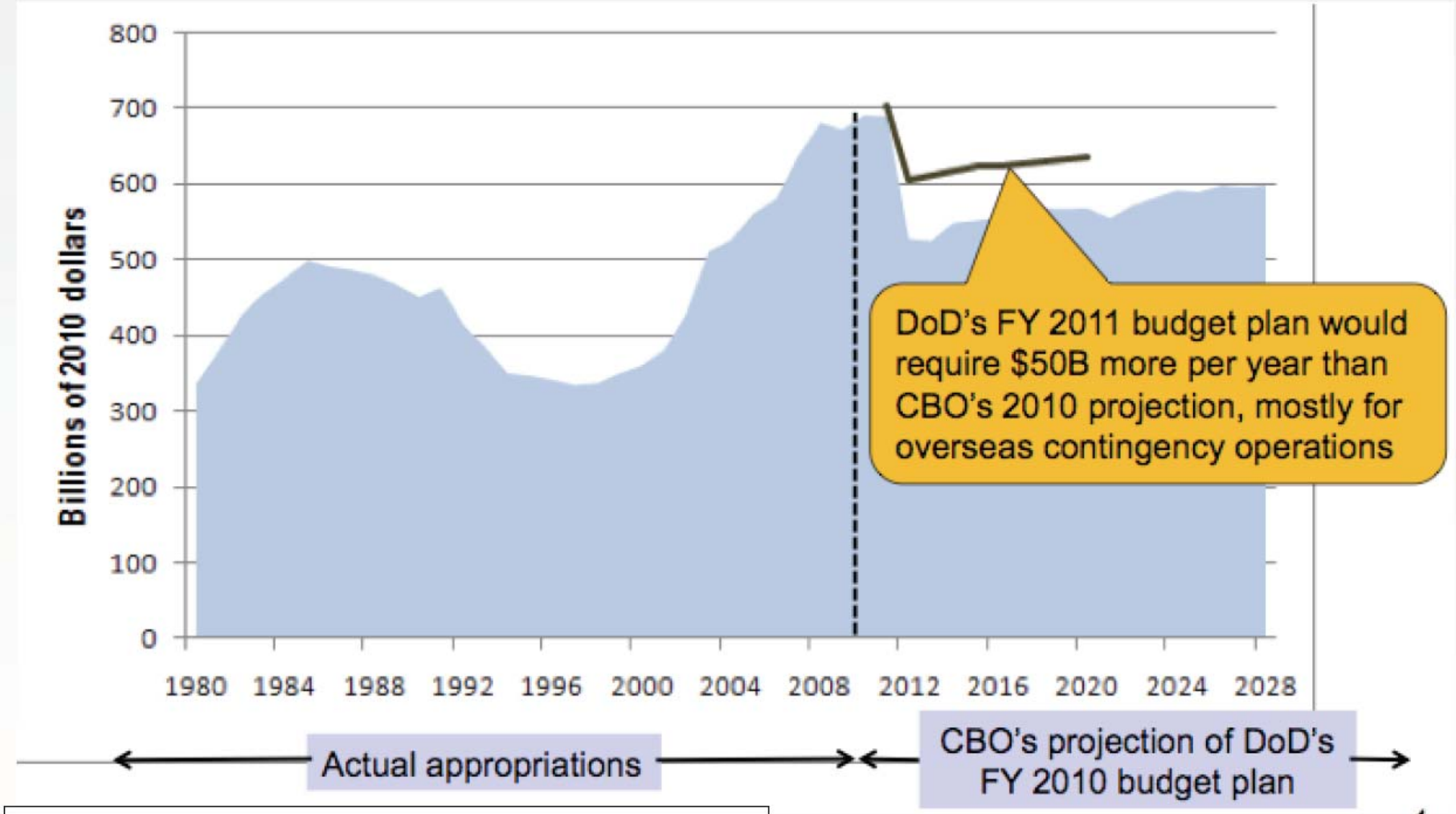
- Until FY 2010, the future year defense budget did not fund OEF, OIF, and other OCO titles in the out years and continued to rely on un-estimated supplementals. This is a continuing problem. The cost projections for the future of OCO could be wholly unrealistic for FY 2010. This is covered in Section II.
- Future year defense budgets are based on cost and program estimates designed to minimize apparent cost. Traditionally, this has been the case. As Section I, Part C indicates; the CBO numbers are already obsolete.
- The program does not seem to fund the expansion or real-world cost of military and civilian manpower, and separates veterans costs from defense costs. The problem is compounded by Congress's inability either to rein in these costs or to fund OCO or O&M titles appropriately.
- Military medical costs present a key problem—but then so do civilian medical costs. This is covered in Sections III and V.
- Future procurement costs are badly underestimated and every service faces a crisis in affordability and cost constraint. This is covered in Section IV.
- No service has a credible program for shaping and maintaining its present forces and or/force goals. This is also covered in Section IV.
- There is no clear way to model true future year costs. An exceptional problem for analysis for FY 2010 is the lack of publication of the FYDP. It is being tied to the publication of the QDR.

CBO Estimate of Real World Baseline Budget Needs



Source: Matthew Goldberg, Acting Assistant Director for National Security, "Discretionary Defense Spending," Presentation to the National Commission on Fiscal Responsibility and Reform, CBO, June 9, 2010, p. 3.

CBO Estimate of Real World Budget Needs with Contingency Operations



Source: Matthew Goldberg, Acting Assistant Director for National Security, "Discretionary Defense Spending," Presentation to the National Commission on Fiscal Responsibility and Reform, CBO, June 9, 2010, p. 4.

Challenges Facing the Administration

- Estimating, effectively budgeting, and efficiently paying for the costs of national security.
- Determining whether the burden on federal spending and the GDP is acceptable, given the threats facing the US.
- Balancing the interaction between national security spending and the overall fiscal squeeze driven by rising mandatory spending and entitlement costs.
- Estimating the true costs of the Overseas Contingency Operations and funding them manageably, without the need for emergency appropriations.
- Bringing the overall pattern of operations and support into a well managed and affordable path.
- Making such a path manageable when dealing with different levels of force-sizing.
- Dealing with a cost-escalation crisis in defense manpower.
- Managing the problem of escalating military medical costs.
- Properly funding O&M and reset costs.
- Dealing with a major crisis in defense procurement and the failure to manage military modernization.

Causal Factors of the Growth in Defense Spending

Operations & Maintenance—Vectors of Cost Escalation

KEY POINTS:

1. O&M Costs are consistently under-estimated.
2. O&M costs have the ability to "crowd-out" other titles within the Pentagon's budget in the coming years.
3. The unpredictability of future war costs renders accurately predicting future O&M costs highly challenging.

Rising Operations and Support Costs: CBO Estimate – I

- Operation and Support (O&S) accounts for about 61 percent of defense funding and pays for DOD's day-to-day operations as well as for military and civilian payrolls. CBO created subcategories of O&S funding based on the force and infrastructure codes used within DOD. O&S funding will reach $425 billion in 2028 not including potential unbudgeted costs, CBO projects.

- Most of the projected growth in O&S funding results from the growing cost of medical benefits for military personnel and from rising wages for both military and civilian personnel.

- As the dashed lines in the figure show, growth in the demand for O&S resources could be greater than DOD anticipates. CBO estimates that with unbudgeted costs, the O&S budget might reach $465 billion in 2028. The largest potential unbudgeted costs are the following:

  - Continued involvement in contingency operations associated with the war on terrorism, such as those in Afghanistan, Iraq, and elsewhere. However, because the President's plan to increase troop levels in Afghanistan was not anticipated in the 2010 DOD budget request, the CBO projection of the 2010 budget did not include the costs of the Afghan "surge". Instead, CBO's long-term estimate assumes a decline in in OCO troop levels to 30,000 US military personnel by FY 2013, at a cost of $20 billion annually (in 2010 dollars), of which $16 billion would be O&S costs.

Source: CBO. *Long-Term Implications of the Fiscal Year 2010 Defense Budget*. January 2010. pg 13, 25, 26

Rising Operations and Support Costs: CBO Estimate – II

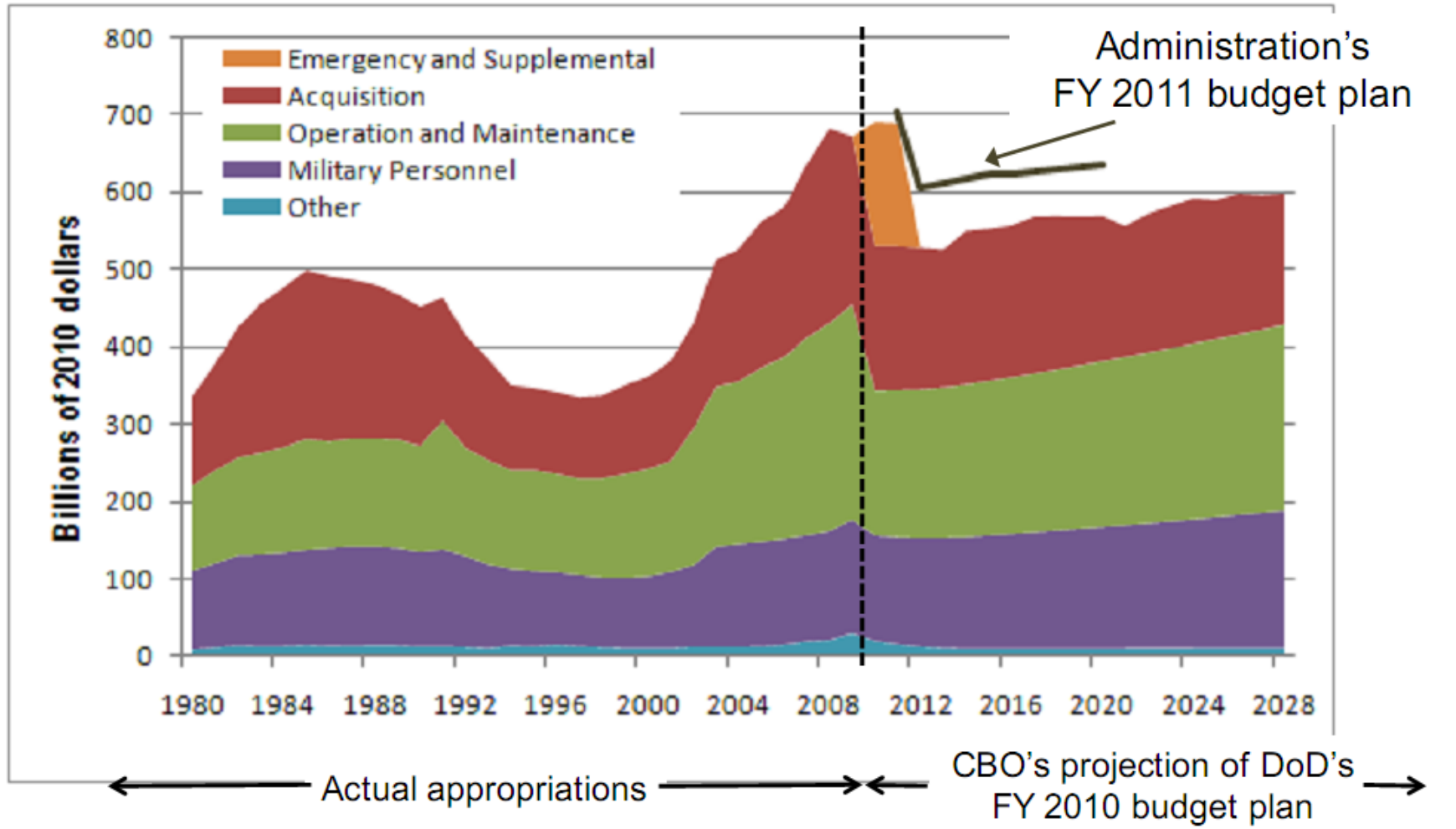
- Faster-than-expected growth in DOD's health care costs, which, in CBO's estimate would account for $112 billion of unbudgeted costs in 2028.

- Increases in every subcategory of CBO's projected funding growth are expected to grow at the same rate as the deflator for GDP (a standard measure of the inflation rate in the US economy) except military and civilian pay, "Operating Forces" and "Medical". CBO projects that those pay levels will grow at the same rate as the employment cost index (ECI), a measure of the average pay level in the U.S. civilian economy.

- In comparison with last year's FYDP (covering 2007 to 2011), the 2008 FYDP shows an average increase in total O&S funding of 6 percent. That increase is largely the result of planned growth in the number of Army and Marine Corps personnel. For the 2007-2013 period, the 2008 FYDP shows a cumulative end-strength increase of 65,000 active-duty Army personnel and nearly 28,000 active-duty Marine Corps personnel.

Source: CBO. *Long-Term Implications of the Fiscal Year 2010 Defense Budget*. January 2010. pg 18, 25, 26
CBO. *The Long-Term Implications of Current Defense Plans: Detailed Update for Fiscal Year 2008*. March 2009, p 4.

Military Personnel and O&M Costs Will Be Much Higher than DOD "Baseline" Budget Estimates



Source: Congressional Budget Office

5

Source: CBO, *Discretionary Defense Spending*, June 2010, pg 6

Continuing Problems in Funding the Intense OPTEMPO of OCO

KEY POINTS:

1.The wars have added a tremendous strain to troops, especially O&M costs.

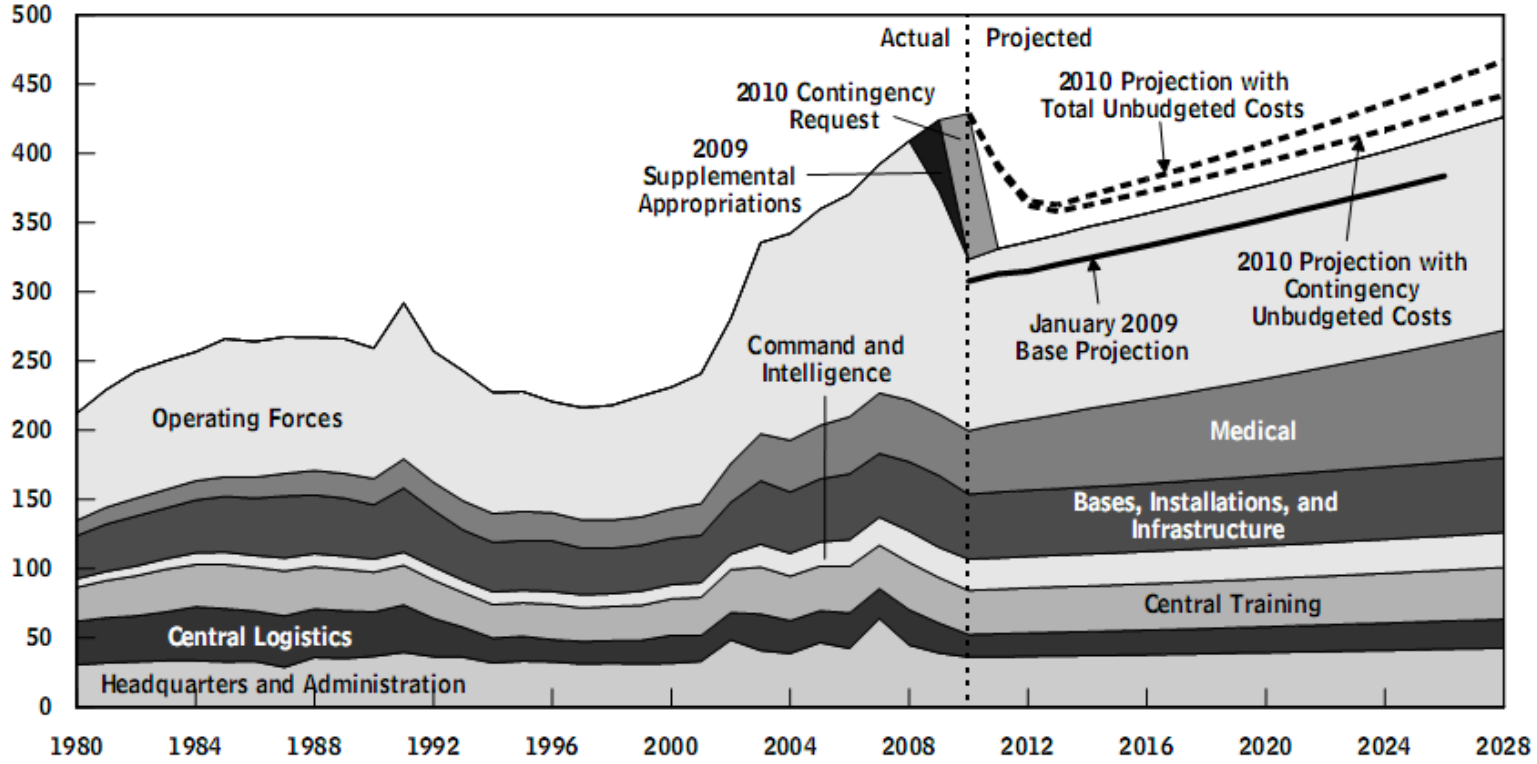
2.The approach of supplemental spending has made the process of determining the "real costs" of the wars extremely difficult.

Costs May Continue to Increase more Rapidly

Figure 3.

Resources for Operation and Support

(Billions of 2010 dollars)



Source: Congressional Budget Office.

Notes: Operation and support consists of the appropriations for military personnel, operation and maintenance, and the revolving funds.

Only the 2009 supplemental appropriations and the 2010 contingency request are separately identified in this figure. The supplemental and emergency appropriations for earlier fiscal years are included with the funding categories.

Source: CBO. *Long-Term Implications of the Fiscal Year 2010 Defense Budget*. January 2010. pg 19

Failing to Deal with the Impact of War and Strains on US Forces

- Wars have sharply stressed our force posture. Clearly too few forces are deployed to fight two major regional contingencies or one major regional and one counterterrorism case.
  - Marginal, not "hollow."
- QDR2006 and service studies have produced "100 Flowers of Uncertainty" in undefined plans and budgets.
- FY2009-FY2013 FYDP Green Book projections show only marginal effort to fund the necessary changes.
  - Rolling "get well" costs versus slipping outlays to out years and "dancing to the right."
- Much depends on Army and Marine Corp modularity and force restructuring.
- Under-planned Iraq War and other resets increasingly interact with procurement problems.
- Manpower entitlement cost legacy is growing; as yet no clear effort to "rebalance" actives, reserves, career civilians, and contractors.
- Questions about whether the US should fight wars involving massive armed nation building. If wars are limited and optional, should the US commit itself?

Defense Manpower Affordability

KEY POINTS:

1.The DOD has seen an essentially static ends strength in active duty military personnel since 1990, but the per soldier O&M costs have risen continuously and quickly, even after accounting for "temporary" costs associated with war.

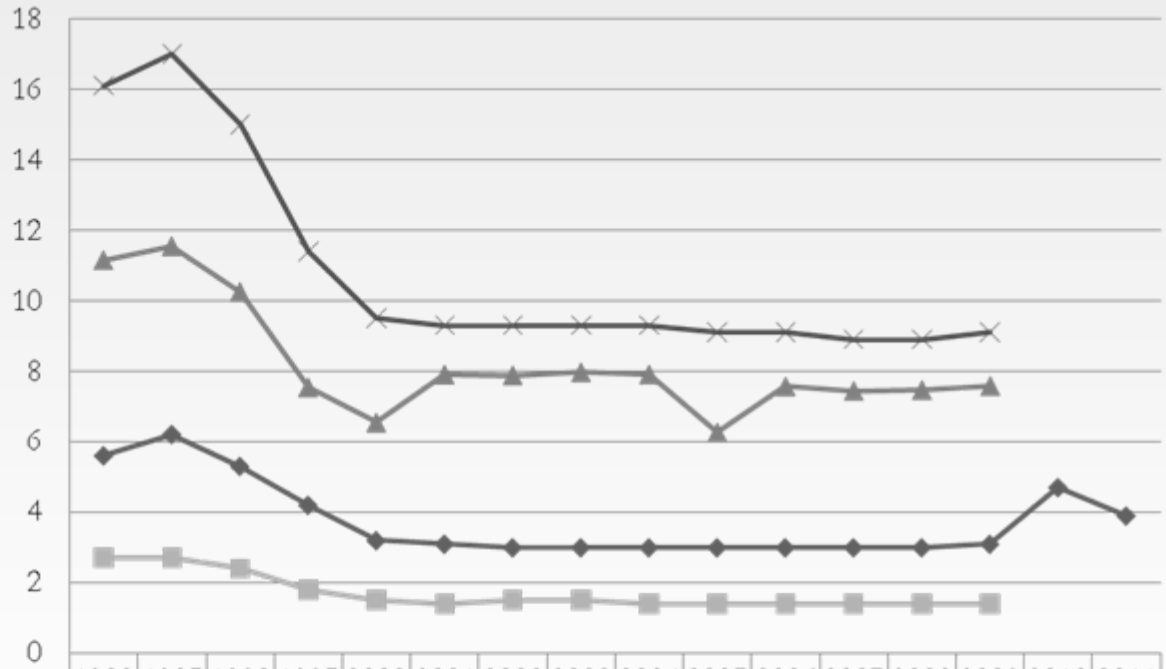
2.Per troop cost growth is primarily attributable to pay raises, growth in healthcare costs, and expansions of other benefits.

3.Per troop cost growth has the potential to threaten Defense strength, as the DOD may not be able to achieve manpower end strength goals.

4.The DOD may be forced into budgeting dilemmas in which it must select from the lesser of two evils by cutting from one important budget title to fund another.

Defense Manpower Places Limited Burden as Shares of Public Employment and Total Labor Force

(Percentages of Indicated Totals)

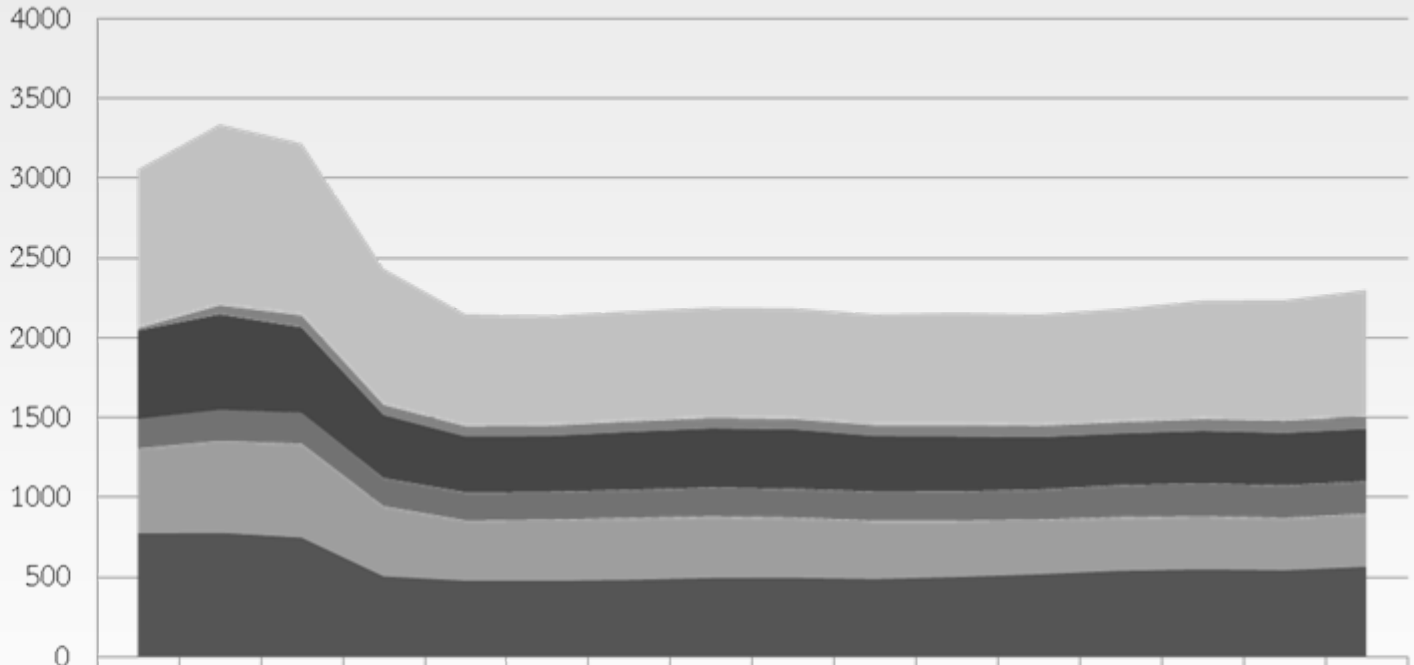


	1980	1985	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
DOD Civilian as % of Public Employment	5.6	6.2	5.3	4.2	3.2	3.1	3	3	3	3	3	3	3	3.1	4.7	3.9
DOD as % of Labor Force	2.7	2.7	2.4	1.8	1.5	1.4	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4		
DOD Mil as % of Public Employment	11.1	11.5	10.2	7.5	6.5	7.9	7.9	8.0	7.9	6.3	7.6	7.4	7.5	7.6		
DOD Total as % of Public Employment	16.1	17	15	11.4	9.5	9.3	9.3	9.3	9.3	9.1	9.1	8.9	8.9	9.1		

Source: Office of the Undersecretary of Defense (Comptroller). *National Defense Budget Estimate for the FY 2011 Budget (Greenbook)*. Updated, January 2010, Table 7-6.

Decline in Total DOD Manpower Since End of Cold War

(Trend in Total Manpower in End Strength in Thousands)

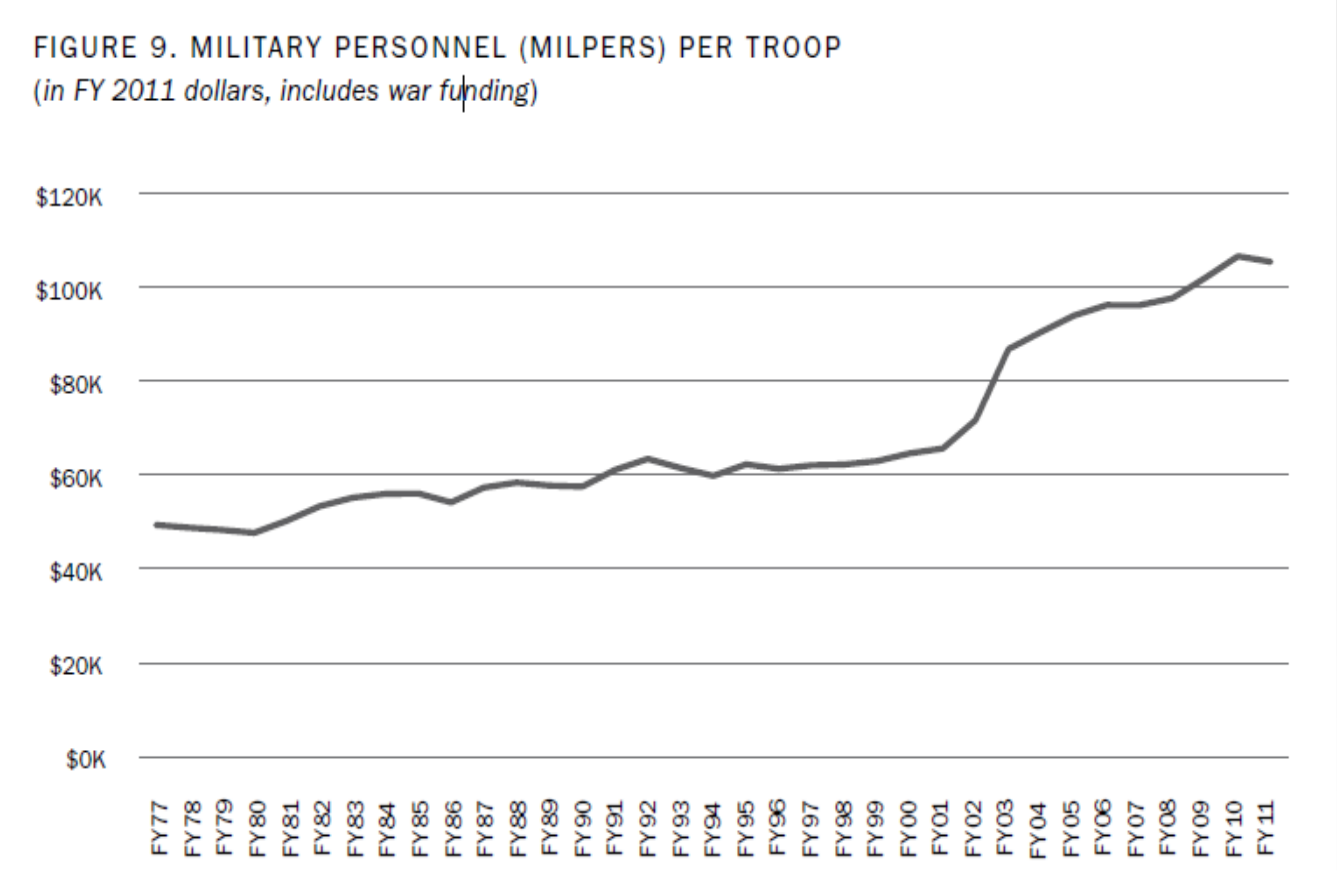


	1980	1985	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total DOD Civilians	991	1,129	1,073	849	698	687	687	688	690	692	700	695	707	739	752	789
Full Time Guard and Reserve	13	55	74	65	65	65	66	66	66	69	71	72	72	75	78	79
Air Force	558	602	539	400	356	354	368	375	377	352	349	333	327	333	332	332
Marines	188	198	197	174	173	173	174	178	178	180	180	186	199	203	202	202
Navy	527	571	583	435	373	378	383	382	373	362	350	338	332	329	324	328
Army	777	781	751	509	482	481	487	499	500	492	505	522	544	553	547	569

Source: Office of the Undersecretary of Defense (Comptroller). *National Defense Budget Estimate for the FY 2011 Budget (Greenbook).* Updated, January 2010, Table 7-5.

Costs Per Troop Have Been Rising Sharply

- Per troop costs are calculated as the ratio of total military personnel to total military personnel funding
- Since FY 2000, personnel spending has risen at a real annual rate of 4.5% (3.4% excluding war costs).



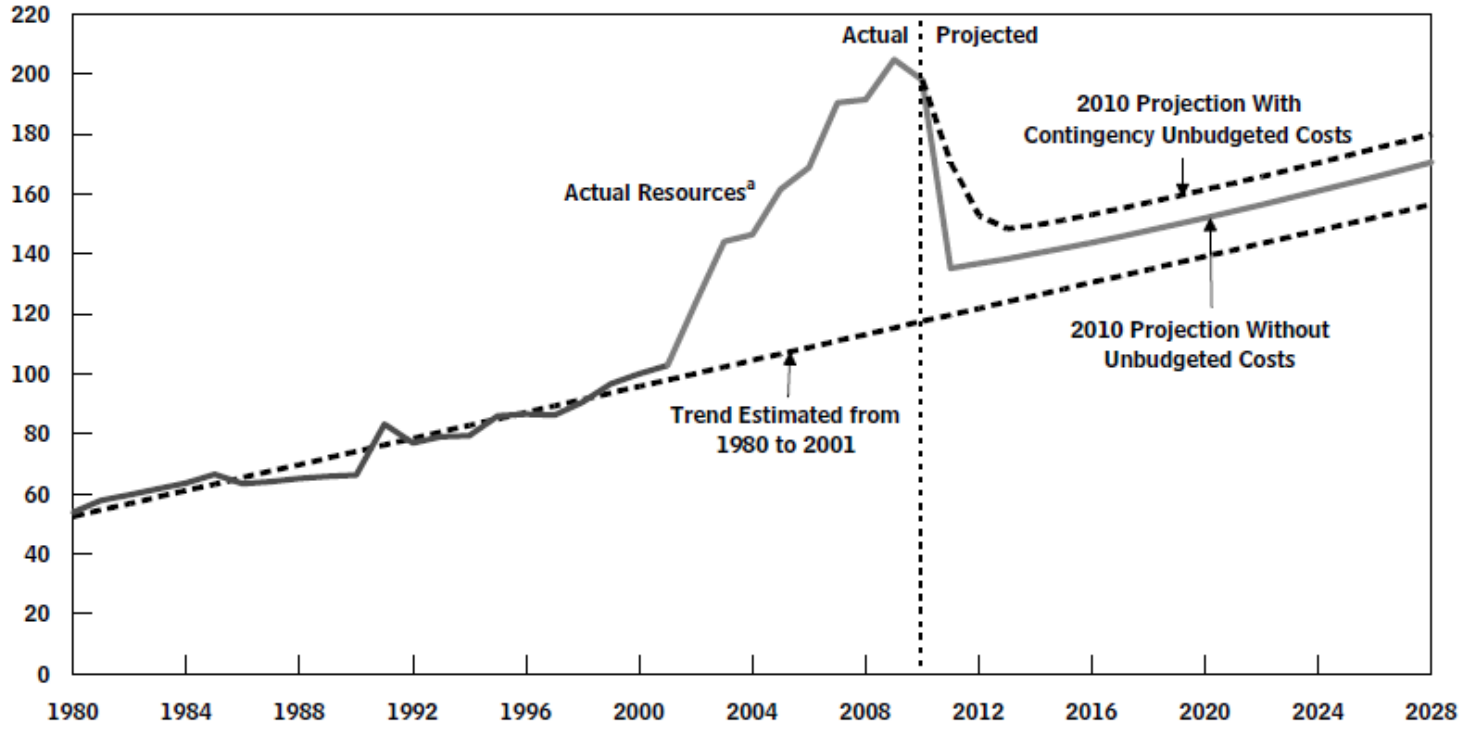
Graph adapted from Harrison, T. "Analysis of the FY 2011 Defense Budget Request". Washington DC: CSBA. 2010. p. 17.

An "Unaffordable" All Volunteer Force?: CBO Projection of Operating Costs Per Soldier Through FY2028

Figure 6.

Trends in Resources for Operation and Maintenance per Active-Duty Service Member

(Thousands of 2010 dollars)



Source: Congressional Budget Office.

a. Includes supplemental and emergency appropriations that had been enacted or requested at the time of the 2010 budget submission.

Source: CBO. *Long-Term Implications of the Fiscal Year 2010 Defense Budget*. January 2010. pg 24

Mil Personnel vs. O&M: CBO Estimate

- CBO projects that funding for military personnel, not including unbudgeted costs, will increase from $142 billion in 2013 to $178 billion in 2028, an annual real growth rate of 1.5 percent. That growth is attributable to two factors:
  - CBO's assumption that military pay raises will keep pace with the ECI (which has historically grown faster than inflation); and
  - CBO's assumption, which is consistent with that of the DOD's actuaries, that medical accrual costs will steadily increase at a nominal annual rate of 6.25 percent from 2011 until 2018, then gradually drop to an annual rate of 4.87 percent by 2028. Those accrual costs are intended to reflect the future liability arising from the government's obligation to provide medical care for current service members (and their dependants) after they retire from the military and reach age 65.

Source: CBO. *Long-Term Implications of the Fiscal Year 2010 Defense Budget*. January 2010. pg 13, 22, 23

Mil Personnel vs. O&M: CBO Estimate

- In CBO's projection, operation and maintenance (O&M) funding, including revolving funds but not unbudgeted costs, will increase from $199 billion in 2013 to $247 billion in 2028, an average annual growth rate of 1.5 percent. Most of that growth comes from the following sources:
  - The assumption that DOD civilian employee pay raises, like military pay raises, will also keep pace with the ECI; and
  - Rising medical costs associated with the Defense Health Program, which provides medical care to active-duty military personnel and their dependants. The Defense Health Program is not funded on an accrual basis.
- About 84 percent of emergency and supplemental funding for O&S is allocated to O&M in 2008; about 16 percent is allocated to paying for military personnel, including special pays and compensation for activating reserve component personnel.

Source: CBO, *Long Term Implications of Defense Spending*, March 2008, p. 6. CBO. *Long-Term Implications of the Fiscal Year 2010 Defense Budget*. January 2010. pg 10, 13

Driving Factors of Per Troop Cost Growth

- According CSBA analyst Todd Harrison, per troop cost growth in the past decade is due primarily to three factors:
  1. Several years of pay raises exceeding the Employment Cost Index (ECI).
  2. New and enhanced benefits for both active-duty troops and retirees.
  3. Growing healthcare costs.

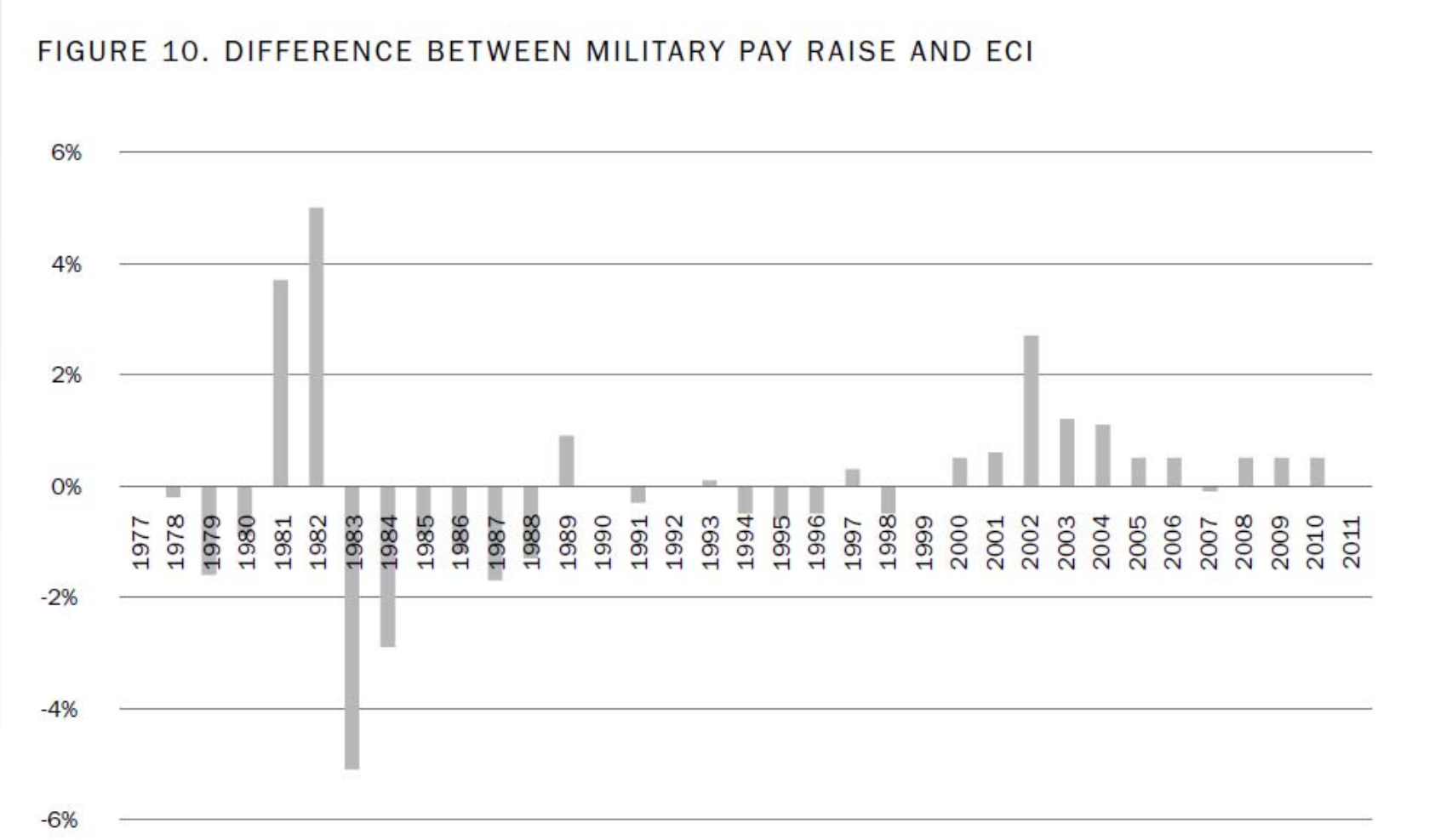
Analysis adapted from Harrison, T. "Analysis of the FY 2011 Defense Budget Request". Washington DC: CSBA. 2010. p. 19.

Causes of Per Troop Cost Growth: Military Pay Raises

- CSBA: "The FY 2004 National Defense Authorization Act mandated that military pay raises equal or exceed the ECI in all future budget submissions."
- Military pay raises exceeded the ECI by an average of 0.5% every year since FY 2000.
- This may seem small, but the per troop cost growth implications are significant as pay raises have a compounding and cumulative effect on military personnel spending:
  - Compounding effect: pay raises build upon each other year after year.
  - Cumulative effect: a raise in one year increases payroll costs in all future years.

Analysis adapted from Harrison, T. "Analysis of the FY 2011 Defense Budget Request". Washington DC: CSBA. 2010. p. 18-19.

Annual Military Pay Raises Have Outpaced ECI Since 2000



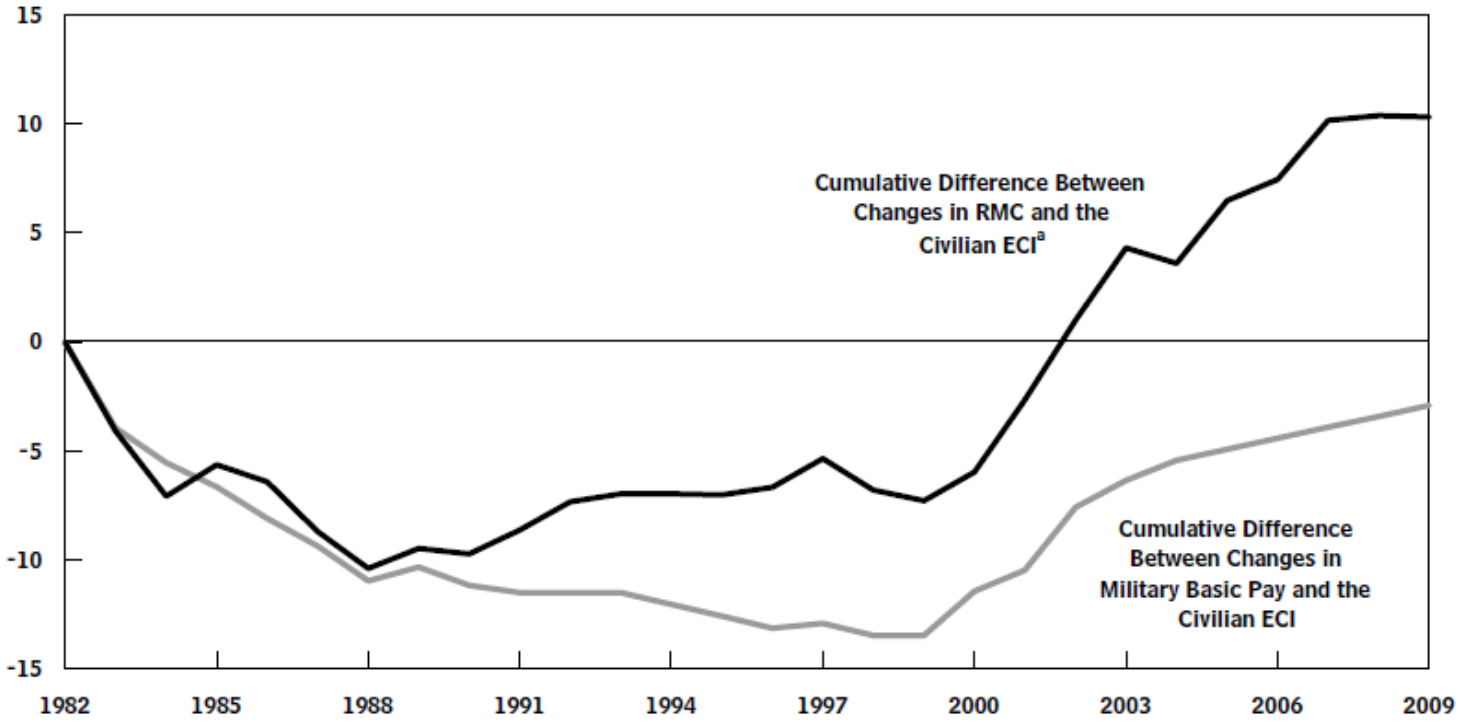
Graph adapted from Harrison, T. "Analysis of the FY 2011 Defense Budget Request". Washington DC: CSBA. 2010. p. 19.

The Military has Experienced Substantial Pay

Figure 4.

Cumulative Difference Between Changes in Military and Private-Sector Pay Raises Since 1982

(Percent)



Source: Congressional Budget Office.

Note: The employment cost index (ECI) measures wages and salaries in private industry.

a. Regular military compensation (RMC) includes basic pay, allowances for housing and subsistence, and the federal tax advantage that occurs because those allowances are not taxed.

Source: CBO. *Long-Term Implications of the Fiscal Year 2010 Defense Budget*. January 2010. pg 21

Which Comes First as a Result of Rising Costs: A Force of One Aircraft, One Ship, or -- One Soldier? Civilian? or Contractor?

Rise in Military Pay

- CBO study found that, in 2006, average cash compensation for military personnel exceeded the compensation of 75 percent of civilians (of comparable age and education)
- Non-cash benefits (e.g., health care) better than for most civilian jobs
- All branches of service met their recruiting and retention goals in 2009 and first part of 2010
  - However, shortages exist in particular military occupations

Impact of Pending Pay Raises

- Administration requested a 1.4% military pay raise for January 2011, equal to the percentage increase in the civilian Employment Cost Index (ECI)
- Congress has enacted ECI + 0.5% military pay raise every year since 2004
- If Congress continues to enact ECI + 0.5% for the next five years (2011 — 2015), cumulative increase in then-year outlays (relative to pay raise = ECI):

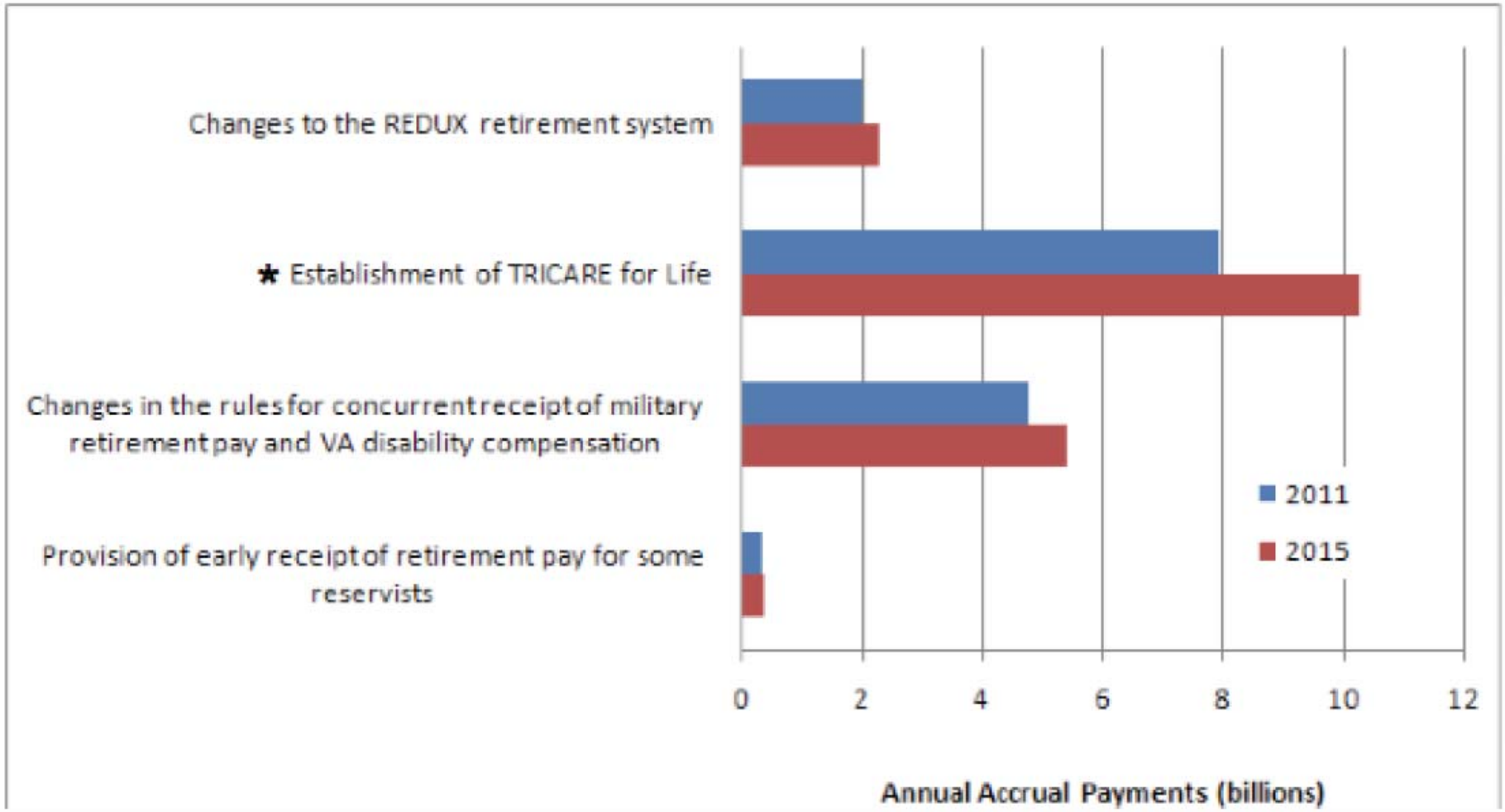
  --$350M in FY 2011

  --$6.9B total for the five years FY 2011 — 2015

  --$21B total for the ten years FY 2011 — 2020

Source: Matthew Goldberg, Acting Assistant Director for National Security, "Discretionary Defense Spending," Presentation to the National Commission on Fiscal Responsibility and Reform, CBO, June 9, 2010, pp. 10-12.

Much More than Pay is Involved: Accrual Costs of Enhancements to Military Compensation Enacted During the Past Decade



Source: Source: Matthew Goldberg, Acting Assistant Director for National Security, "Discretionary Defense Spending," Presentation to the National Commission on Fiscal Responsibility and Reform, CBO, June 9, 2010, p. 7

Causes of Per Troop Cost Growth: Retirement Benefits

- Retirement pay for 20+ years of service increased from 40% to 50% of base pay.
- Retirement pay for surviving spouses of deceased service members with 20+ years of service rose from 35% to 55% of the service member's base pay.
- In some situations, military retirees are entitled to concurrently receive both military retirement pay and veteran's compensation.
- Age requirement for reservists to receive retirement pay was reduced.

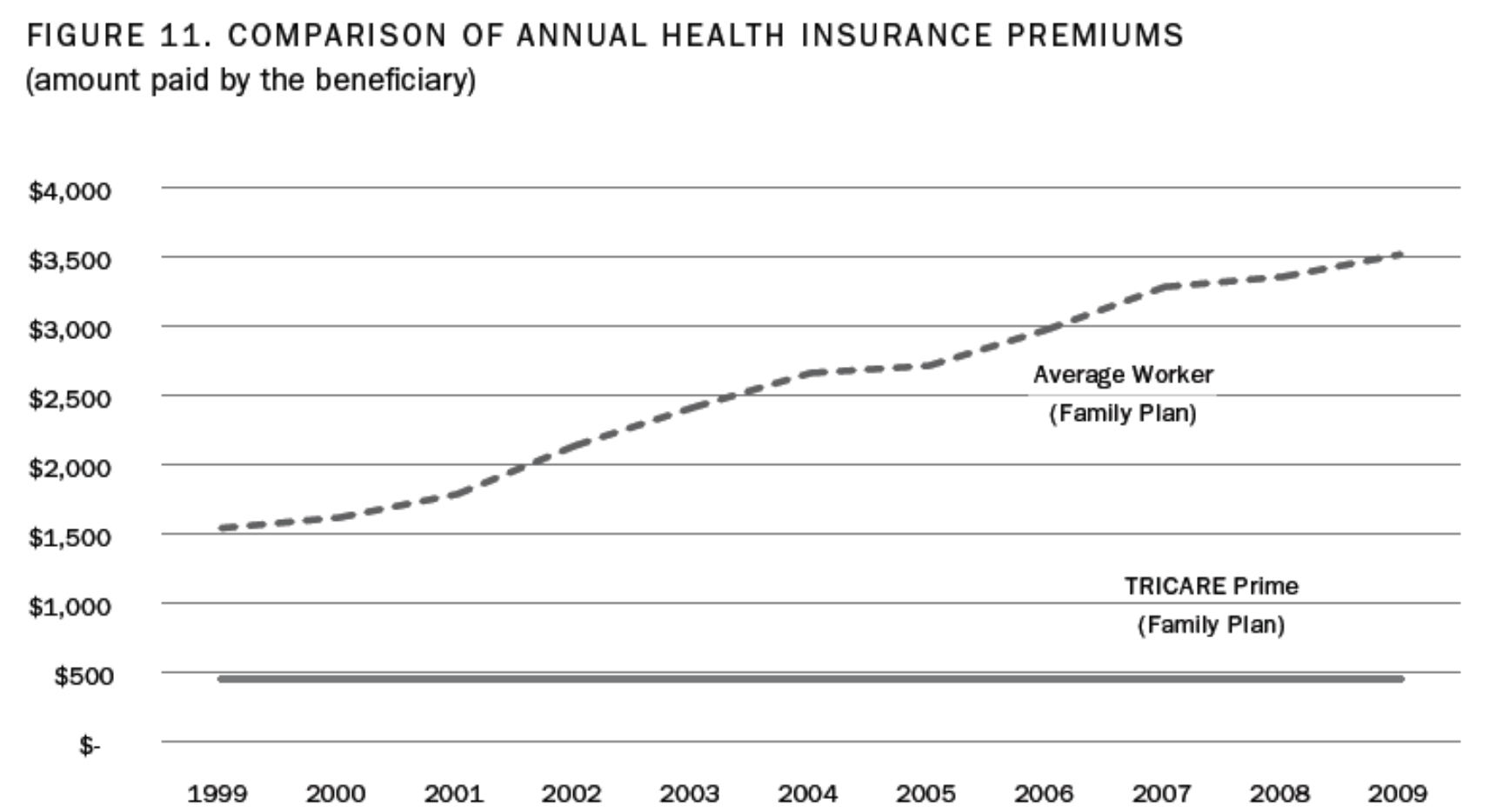
Analysis adapted from Harrison, T. "Analysis of the FY 2011 Defense Budget Request". Washington DC: CSBA. 2010. p. 19.

Causes of Per Troop Cost Growth: Medical Benefits

- Total military healthcare costs in FY 2011 equaled $20.7 billion or approximately one-tenth of the total DOD BA.
- Funding for the Defense Health Program (DHP) has increased at a real annual rate of 6.9% since FY 2000.
- Reasons for rapid cost growth:
  - New and expanded benefits
  - Healthcare cost inflation throughout the country
  - Increased utilization of DHP resources by eligible beneficiaries
  - TRICARE premiums and co-pays have not increased since 1995
  - Retirees and eligible family members of service members are increasingly substituting alternate health insurance programs for TRICARE, expanding the number of DHP users
  - TRICARE for Life Program: enacted by Congress in FY 2001; "provides premium-free supplemental insurance for military retirees enrolled in Medicare and applies retroactively to retirees who retired before the benefit was enacted"
- The final section of this brief analyzes the impacts of medical care cost growth on the DOD as a whole.

Analysis adapted from Harrison, T. "Analysis of the FY 2011 Defense Budget Request". Washington DC: CSBA. 2010. p. 20-21.

TRICARE Premiums and Co-Pays Have Remained Unchanged Since 1995



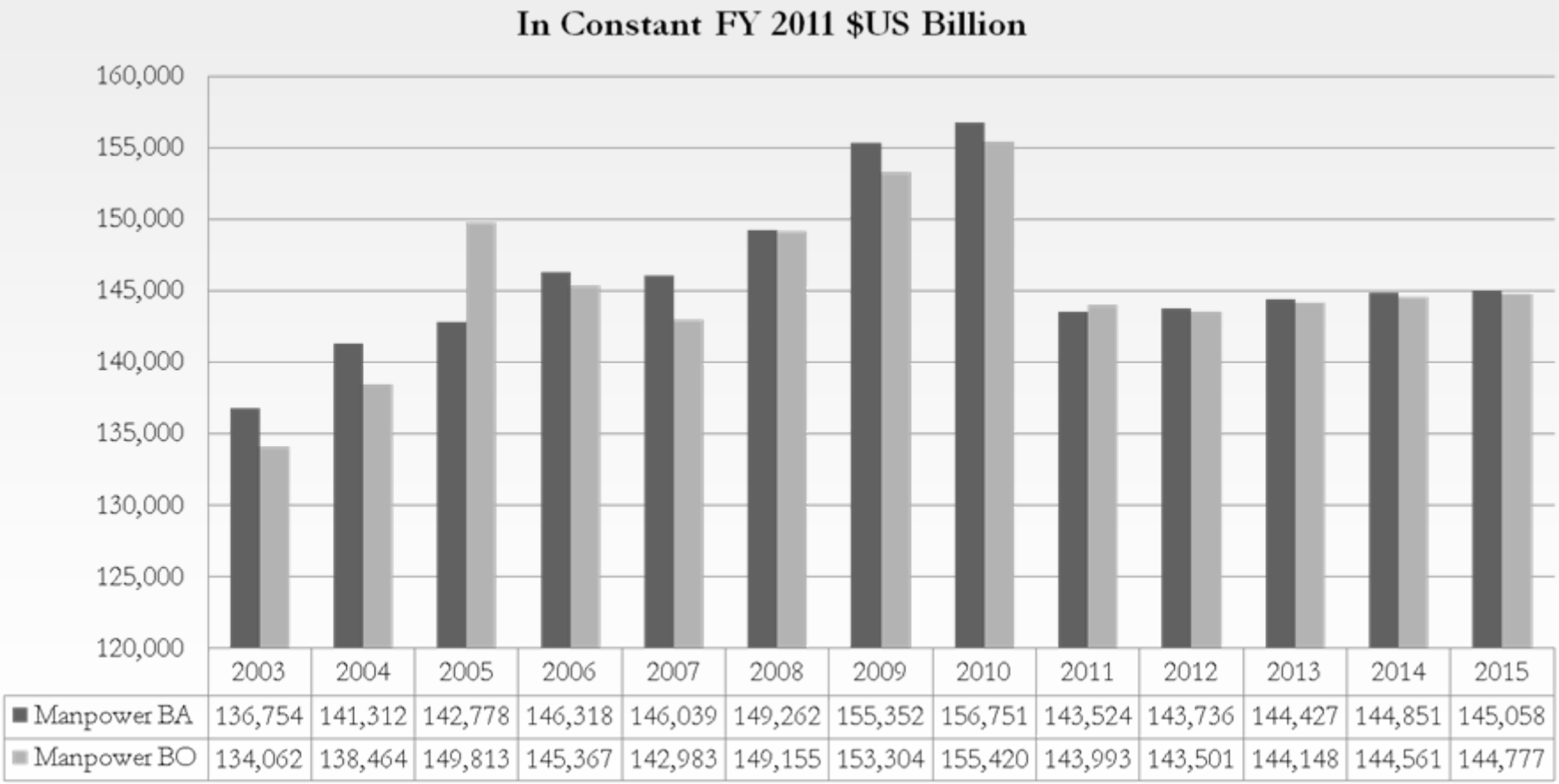
Calculations and observations based upon data found in: Harrison, T. "Analysis of the FY 2010 Defense Budget Request". Washington DC: CSBA. 2010.

The TRICARE "Disease"

- **TRICARE Prime annual enrollment fees for non-Medicare retirees have been fixed since 1995 at $230 single/$460 family**
- **DoD proposed increases in the enrollment and other fees in its budget submissions for FY 2007, 2008, 2009**
  - **-- enrollment fees and copayments for TRICARE Prime**
  - **--charge for inpatient care for TRICARE Standard**
- **Congress explicitly prohibited those proposed fee increases in the past four defense authorization acts**

Source: Source: Matthew Goldberg, Acting Assistant Director for National Security, "Discretionary Defense Spending," Presentation to the National Commission on Fiscal Responsibility and Reform, CBO, June 9, 2010, p. 13

Planned Manpower Expenditures Do Not Reflect Future Plans for Constant Manpower Levels and Major Rises in Costs



Source: Office of the Undersecretary of Defense (Comptroller). *National Defense Budget Estimate for the FY 2011 Budget (Greenbook)*. Updated, January 2010, Tables 6-9 and 6-11

Need More Realistic Plans and Budgets to Determine Contingency Capability as well as Army and Marine Corps End Strength

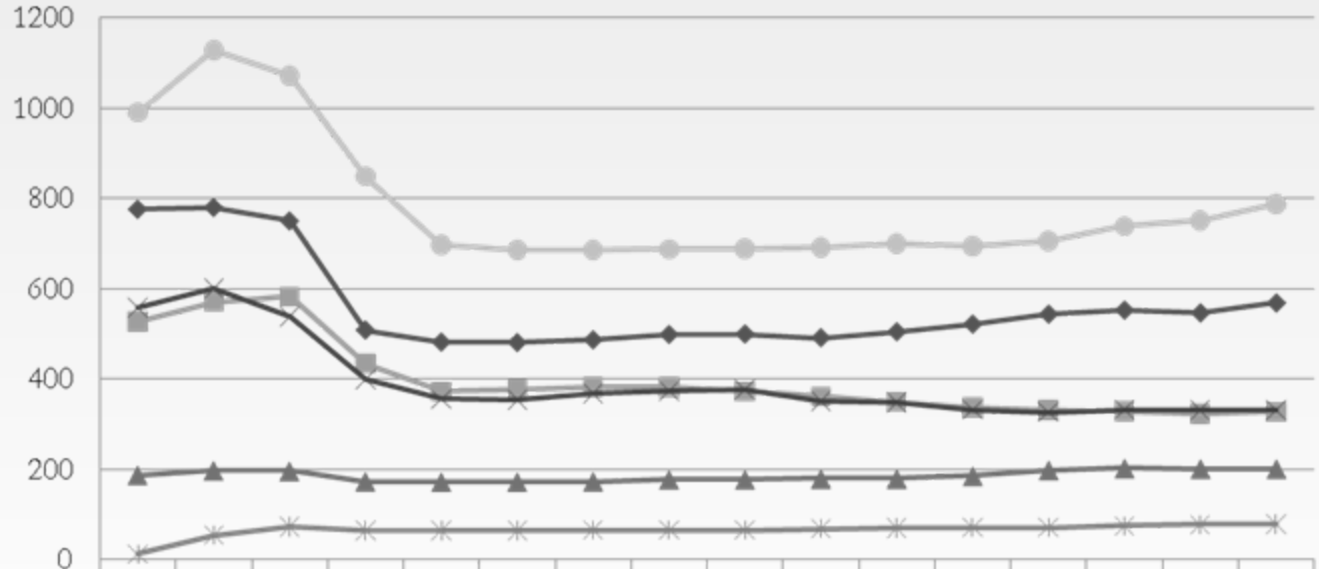
- Recent deployment levels have strained active and reserve force to limit, if not beyond.
- Need fully deployable forces, not Cold War legacies or stay at home "battle buddies."
- Planned changes in land force structure and deployability at least partially address these issues, but it is unclear whether this is enough to deal with current and future long wars.
- Similarly, boosting of Army and Marine Corps end strength is affordable, but may not be enough for long war era if it continues.
- Can't have two major regional contingency strategies with one major regional contingency manpower base.

How Much Manpower is Enough? How Much is Affordable?

- Legacy of current wars is high military manpower costs which limit ability to pay for adequate force levels.
  - Cost containment is a key issue, but so is force quality.
  - Need "risk premiums" when so few Americans serve.
  - Military medical costs are creating major new "entitlement" cost.
- Need more realism in determining how combat ready and deployable reserves can and should be.
- Need to re-examine military-civilian trade-offs in terms of cost-effectiveness:
  - Military versus career civilian.
  - Career military and civilian versus contractor.
  - Role of contractors in combat.
- Uncertain calls for "Supersoldier" character of QDR.
  - *Everyone above average with unusual foreign language skills?*
- What should the future manpower impact of the State Department and other civilian agencies be?

Army and Marine Corps Gains Partly Offset by Air Force and Navy Losses

(Trend by Key Force Element in End Strength in Thousands)



	1980	1985	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Army	777	781	751	509	482	481	487	499	500	492	505	522	544	553	547	569
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Marine Corps	188	198	197	174	173	173	174	178	178	180	180	186	199	203	202	202
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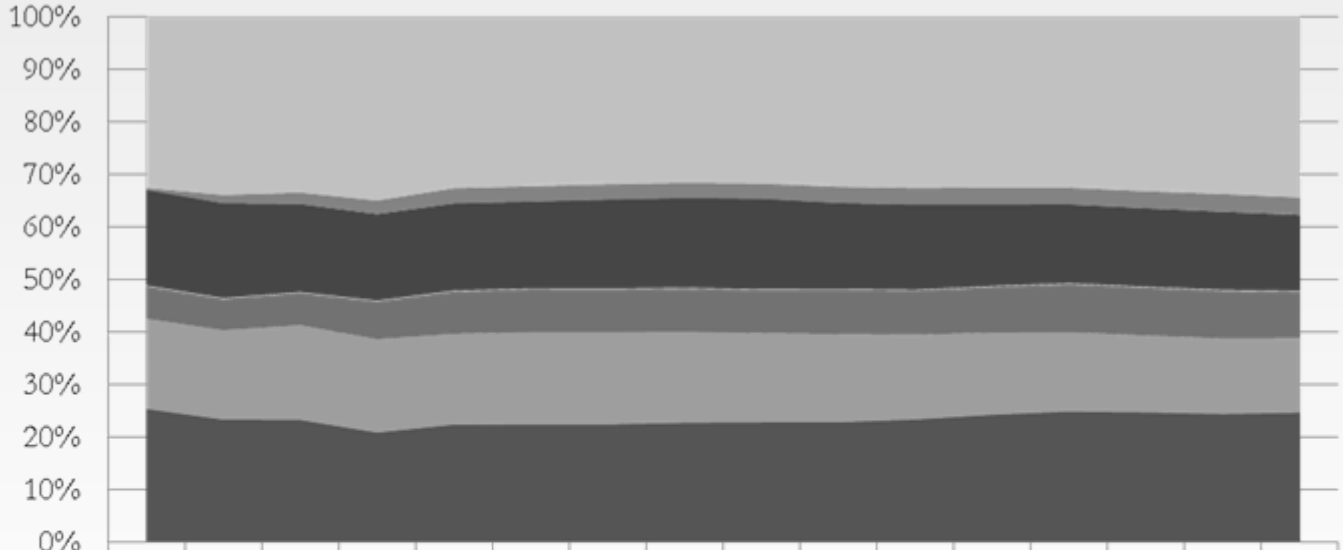
Civilians	991	1,129	1,073	849	698	687	687	688	690	692	700	695	707	739	752	789

Source: Office of the Undersecretary of Defense (Comptroller). *National Defense Budget Estimate for the FY 2011 Budget (Greenbook).* Updated, January 2010, Table 7-5

Currently Planned Army and Marine Corps Gains Do Not Lead to Dramatic Shifts in Force Share

(Percentage by Key Force Element in End Strength in Thousands)



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Source: Office of the Undersecretary of Defense (Comptroller). *National Defense Budget Estimate for the FY 2011 Budget (Greenbook).* Updated, January 2010, Table 7-5

Measuring the Extent To Which the U.S. Has Too Few Forces or the Wrong Forces

- Can modularity, changing MOS specialties, rebalancing actives and reserves really do the job?
- Net-centric to Human-centric to Cost Containment to Allied Reliance.
- High tech "RMA" versus Legacy Systems on Hand?
- What war(s) to plan for? What does "full spectrum" mean?
  - Iraq vs. Korea vs. Taiwan
  - Long War
  - War "X?"
- Coalition of the Unpredictable and Unquantifiable.

Rebalancing the Force: Meeting the Needs of the U.S. Active and Reserve Military

- Impact of Past Cuts on end strength:
  - Military from 2.1 million in FY1990 to 1.5 in FY2007 to 1.51 in FY2011
  - Civilians from 997,000 in FY1990 to 664,000 in FY2007 to 789,000 in FY2011.
  - Contractors?
- Problems of determining risk premium when so few serve.
- Realism of uncertain calls for "Super soldier" in QDR.
  - Everyone above average with unusual foreign language skill.
- Real-world life cycle cost and productivity of military vs. civilian vs. contracting out.
  - Civilians as supplements to military end strength?
- Need for "rebalance" actives and reserves and ensure all take a turn in combat.
- Impact of over-deployment and the need for a new "Social Contract".
  - Need for time to train; career development and family.
  - Need for longer reserve duty cycles less frequently.
- Deployment cycles as of 2010 QDR:
  - Active component: two years at home for every one year deployed.
  - Five years demobilized for every one year mobilized.

Source: DOD, *2010 Quadrennial Defense Report*, February 2010, p 50.

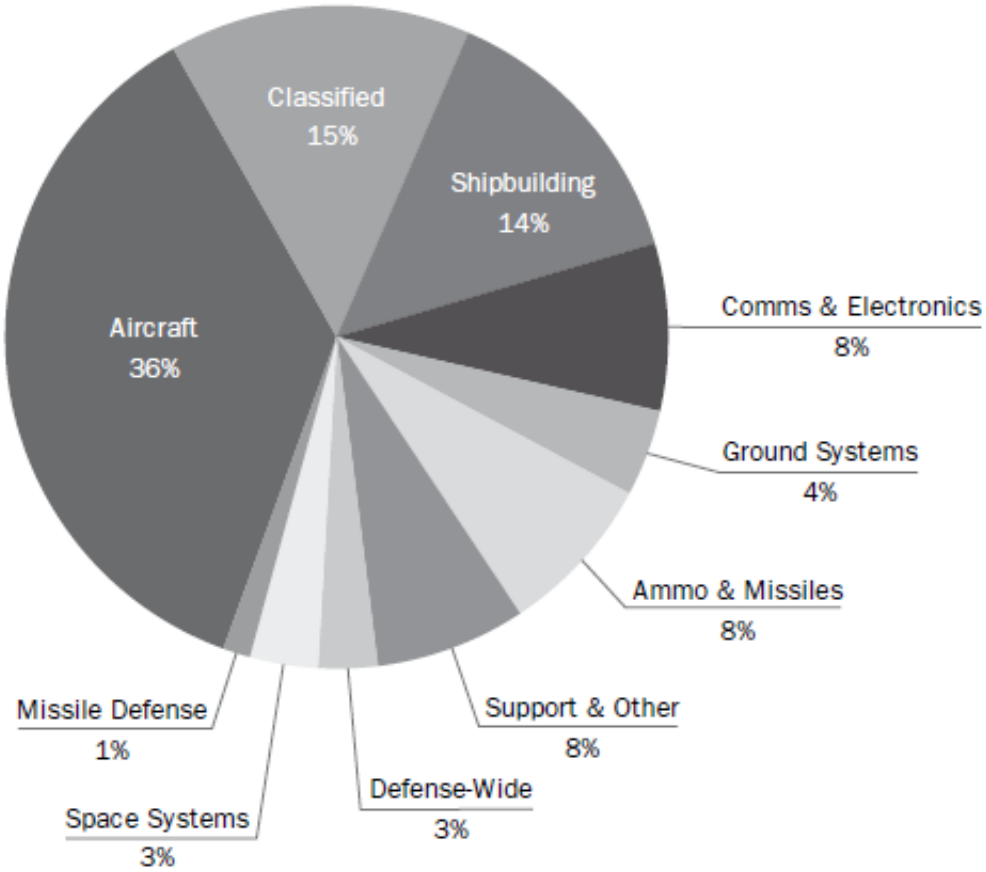
The Procurement and Modernization Challenge

KEY POINTS:

1. Many DOD procurement programs still reflect Cold War era acquisition requirements rather than the capabilities needed to execute new missions such as CT, CS and humanitarian operations.
2. Moreover, rampant cost growth and long time delays have become the norm for DOD procurement programs.
3. Secretary of Defense has cut a number of "unnecessary" programs.
4. The DOD has often attempted to fudge its way out of procurement problems by cutting RDT&E funding and slipping procurement funding into the out years.
5. In turn, procurement program failures and inefficiencies may lead to reset crises—as the military needs to repair and refit degraded capital—as well as investment crisis—as the military may in the near future find itself without the capabilities it requires to fulfill its missions.

Procurement Funding by Category in FY 2011

FIGURE 16. FY 2011 BASE PROCUREMENT BUDGET REQUEST BY CATEGORY



Graph adapted from Harrison, T. "Classified Funding in the FY 2011 Defense Budget Request". Washington DC: CSBA. 2010.

Legacy of Cold War Programs and Past Efforts At Force Transformation That Are Fundamentally Unaffordable

- **Legacy Problems:**
  - FCS
  - Ship building
  - Aircraft
  - Net and IT Systems: Agency-wide
  - Space

- **New Requirements:**
  - Counterterrorism
  - Counterinsurgency
  - Stability/Humanitarian Operations
  - Cyber-warfare

Major Weapons Program Cost Escalation

- From FY2001 to FY2007, the DOD has doubled its planned investments from $750 billion to $1.5 trillion.
- In recent years, GAO analysis showed that the cumulative cost growth on DOD programs had reached $300 billion more than had been projected initially (in fiscal year 2010 dollars).
- The same programs have also experienced an increase in the time needed to deliver initial capabilities. The average scheduling delay for initial capabilities has risen from 18 months in FY 2003 to 22 months in FY 2008.
- DOD's annual investment in RDT&E and procurement of major weapon systems is at its highest level in two decades.
- Even though for the period 2000-2006 defense spending accounts grew at an annual average of a 5.4%, DOD projects that for the 2008-2012 period the growth rate will be -8.5%!

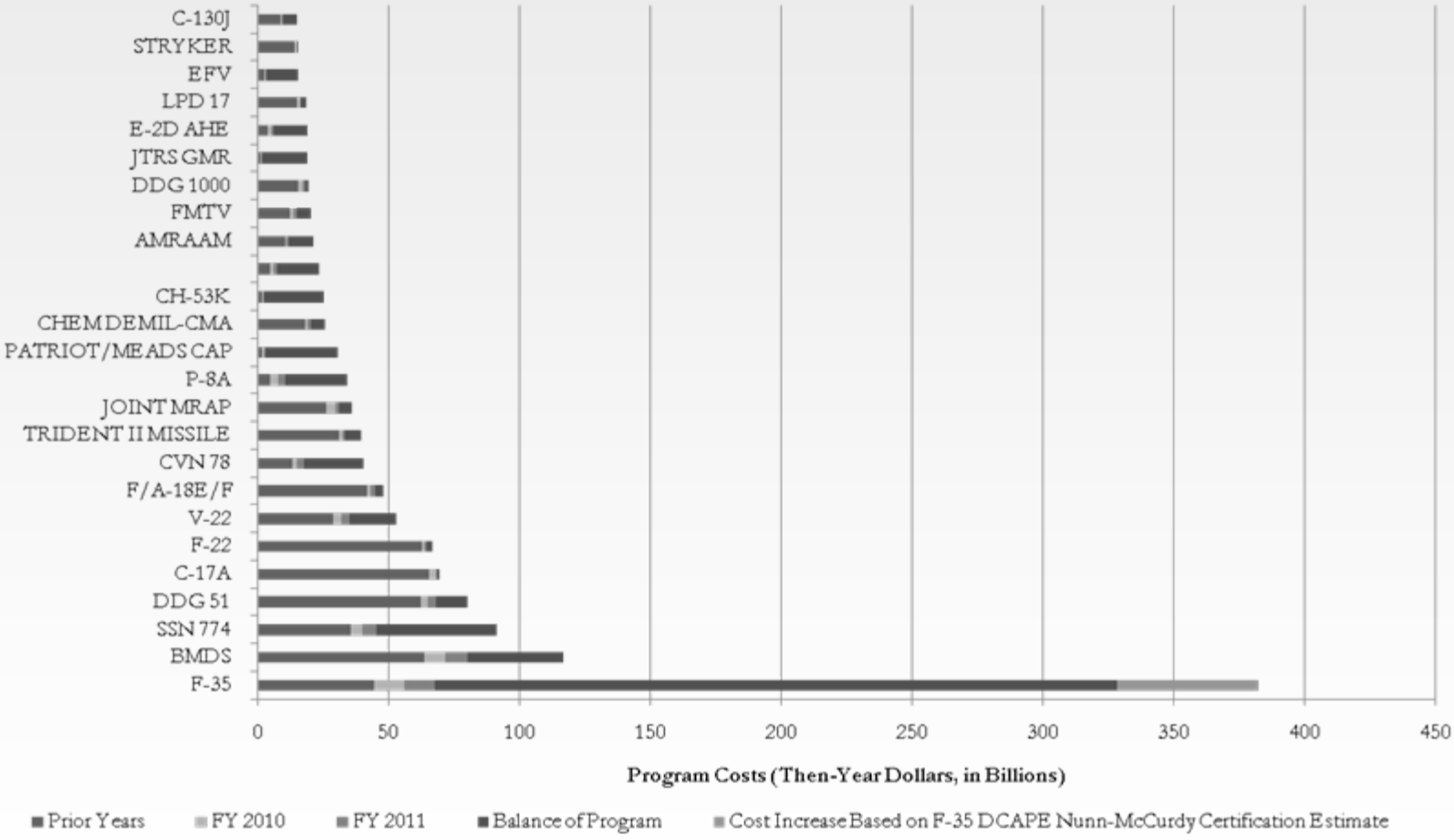
Source: GAO, *Defense Acquisitions: Assessment of Selected Weapons Programs,* March 2007 and March 2008. GAO, *Defense Acquisitions: Measuring the Value of DOD's Weapon Programs Requires Starting with Realistic Baselines*, GAO-09-543T, April 2009.

Major Weapons Program Cost Escalation

- The GAO estimates that 60 of the 72 programs assessed in 2008 had to reset their business case at least once because they lacked necessary knowledge to reasonably estimate the cost and time it would take to develop and produce the product.
- In FY 2009 dollars, GAO estimates the cost growth of the major defense acquisitions programs to be $183 billion in the FY 2003 portfolio, $301.3 billion and $296.4 billion in the FY 2007 and FY 2008 portfolios, respectively.
- Roughly 42 percent of the assessed programs show more than 25 percent growth in program acquisition unit cost.
- The total RDT&E cost of the FY 2008 major acquisition program portfolio changed by 42 percent from the first cost estimate.

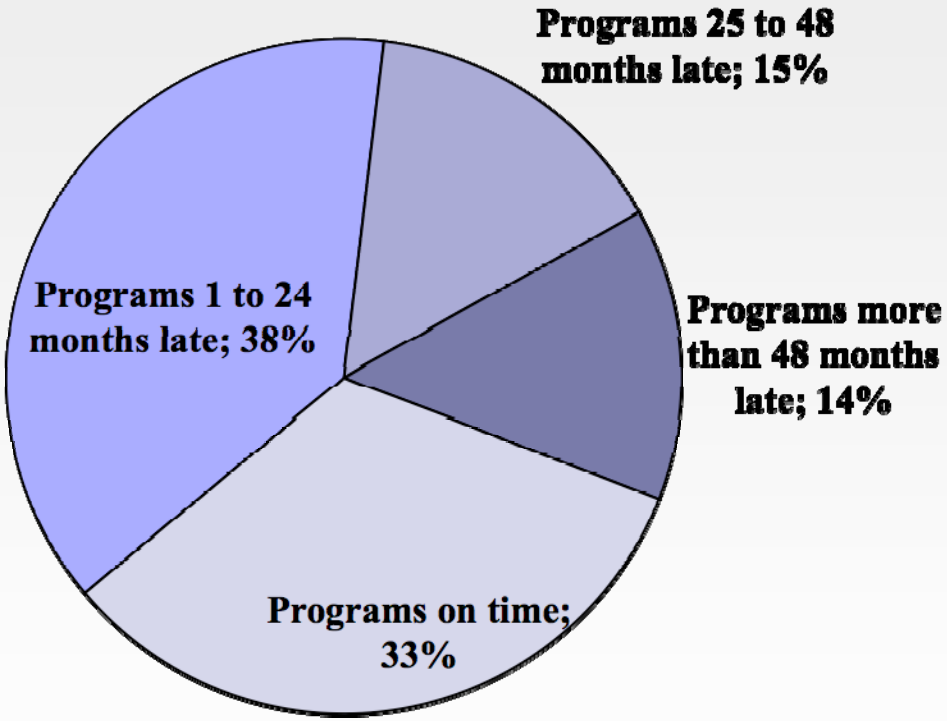
Source: Government Accountability Office, *Defense Acquisitions: Measuring the Value of DOD's Weapon Programs Requires Starting with Realistic Baselines*, GAO-09-543T, April 2009.

Top 25 MDAPs by Total Acquisition Cost



Source: December 2009 Selected Acquisition Report Summary Tables; Joint Strike Fighter Nunn-McCurdy Certification, June 1, 2010; analysis by CSIS Defense-Industrial Initiatives Group

Delays Become the Rule and Not the Exception

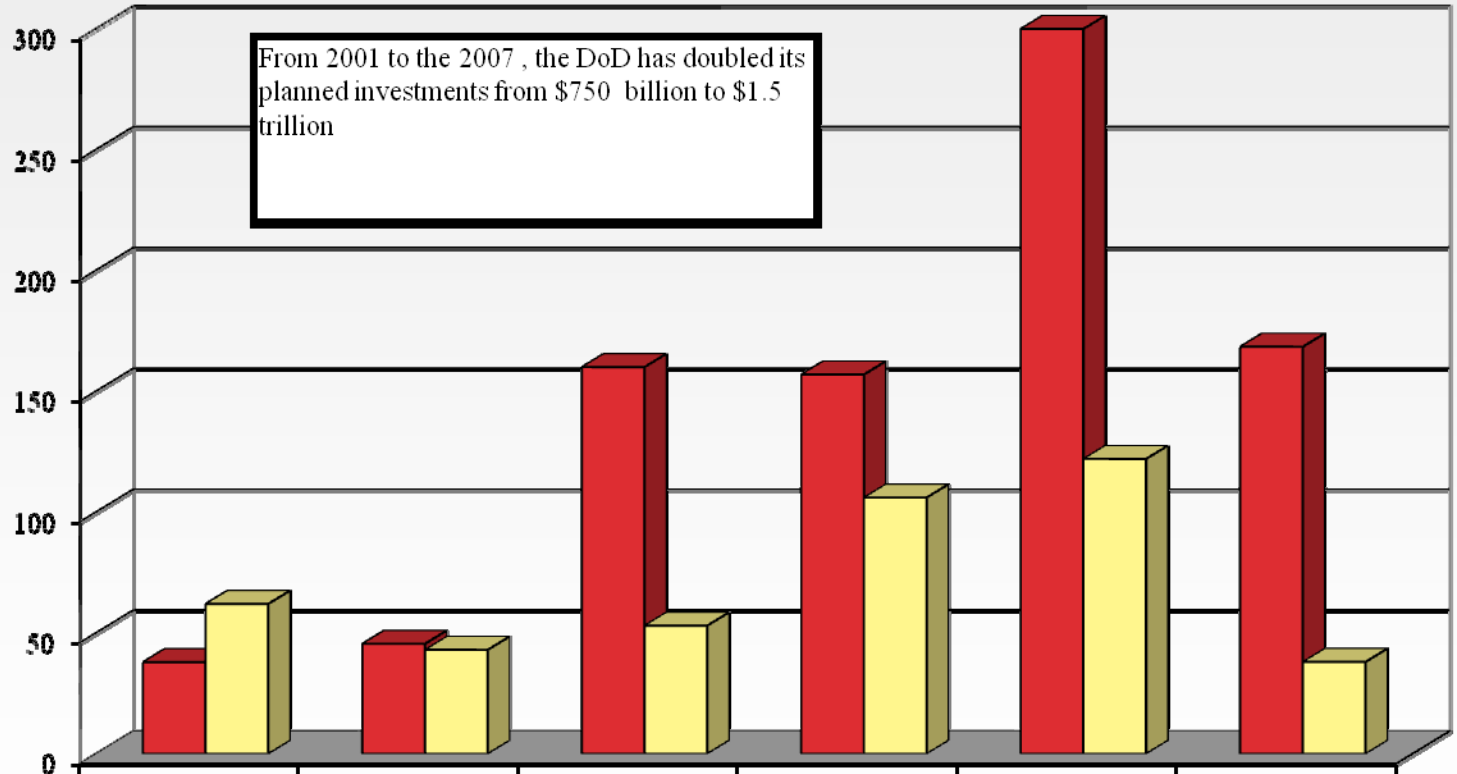


Note: This reflects planned or actual delivery of initial capabilities for programs with comparable schedule data.

Source: GAO, *Defense Acquisitions, Assessments of Selected Weapons Systems*, GAO-08-467SP, March 2008, p. 2

Procuring Defense to Death: "Transformational" Cost Escalation

(Measured as Percent Rise in Unit Cost by Program)



	JSF	FCS	F-22A	Evol Expend Launch Veh	SBIRS High	Exped. Fight Veh
Unit cost change in %	37.9	45.5	160	156.9	299.9	168.4
Time period in months	62	43	53	106	122	38

Source: Government Accountability Office, *Defense Acquisitions: Assessments of Selected Weapons Systems*, GAO-08-467SP, March 2008.

The Need for Success and Cost Containment in Major Weapons Programs

- Weapon systems comprise one of the largest discretionary items in the federal budget, and will face pressure from rising mandatory spending obligations.
- Weapon systems face competing demands from other DOD priorities, i.e. operations in Afghanistan and Iraq.
- Weapons programs now take far longer to develop and deploy and cost far more to buy, than is acceptable:
  - Joint Strike Fighter program unit costs have escalated 39% while the quantity to be procured has decreased by 14.8%.
  - Future Combat Systems costs have escalated 45% to $129.7 billion since the program started.
  - F-22A Raptor program unit costs have nearly tripled while the quantity to be procured has decreased by 72%.
  - The unit cost of the SBIRS-High program has escalated 281% in 13 years.
  - Services, contractors, and DOD are trapped in a mutually destructive "liar's contest" to out promise competing programs, branches, and services.

Source: GAO, *Defense Acquisitions: Measuring the Value of DOD's Weapon Programs Requires Starting with Realistic Baselines*, GAO-09-543T, April 2009. GAO, *Defense Acquisitions: Assessment of Selected Weapons Programs*, GAO-10-388SP, March 2010.

Examples of Key Program Management Failures

Table 1: Changes in Costs and Quantities for Ten of the Highest Cost Acquisition Programs

Program	Total cost (fiscal year 2009 dollars in millions)		Total quantity		Acquisition unit cost
	First full estimate	Current estimate	First full estimate	Current estimate	Percentage change
Joint Strike Fighter	206,410	244,772	2,866	2,456	38
Future Combat System	89,776	129,731	15	15	45
Virginia Class Submarine	58,378	81,556	30	30	40
F-22A Raptor	88,134	73,723	648	184	195
C-17 Globemaster III	51,733	73,571	210	190	57
V-22 Joint Services Advanced Vertical Lift Aircraft	38,726	55,544	913	458	186
F/A-18E/F Super Hornet	78,925	51,787	1,000	493	33
Trident II Missile	49,939	49,614	845	561	50
CVN 21 Nuclear Aircraft Class Carrier	34,360	29,914	3	3	-13
P-8A Poseidon Multi-mission Maritime Aircraft	29,974	29,622	115	113	1

Source: GAO analysis of DOD data.

Source: Government Accountability Office, *Defense Acquisitions: Measuring the Value of DOD's Weapon Programs Requires Starting with Realistic Baselines*, GAO-09-543T, April 2009.

Defense Acquisition Programs Recommend for Termination

	System	Total estimated cost (dollars in billions)	Secretary's comments	Congressional action
Recommended termination	VH-71 Presidential Helicopter	$13	Plan to develop options for a new program	Conferees recommended $100 million for technology capture that DOD has budgeted for the VH-71 program.
	Combat Search and Rescue Helicopter	Unspecified	Plan to reexamine requirements	Did not authorize appropriations for the program.
	Next-Generation Bomber	Unspecified	Will not initiate new development program without better understanding of the requirement and technology	Supported development of a Next- Generation Bomber Aircraft, but did not authorize appropriations.
	Future Combat System–Manned Ground Vehicles	87	Plan to reevaluate requirements, technology, and approach before relaunching and recompeting program	Directed Army to develop, test, and field an operationally effective and affordable next generation ground combat vehicle. Conferees recommended rescission of $26 million in existing funding.
	Transformational Satellite	26	Plan to buy two more AEHF satellites as alternative	Did not authorize appropriations for the program.
	Ballistic Missile Defense–Multiple Kill Vehicle	Unspecified	Plan to reexamine requirements; no mention of new program	Did not authorize appropriations for the program.

Source: GAO, *Observations on Weapon Program Performance and Acquisition Reforms*, 19 May, 2010

Defense Acquisition Programs Recommend for Termination

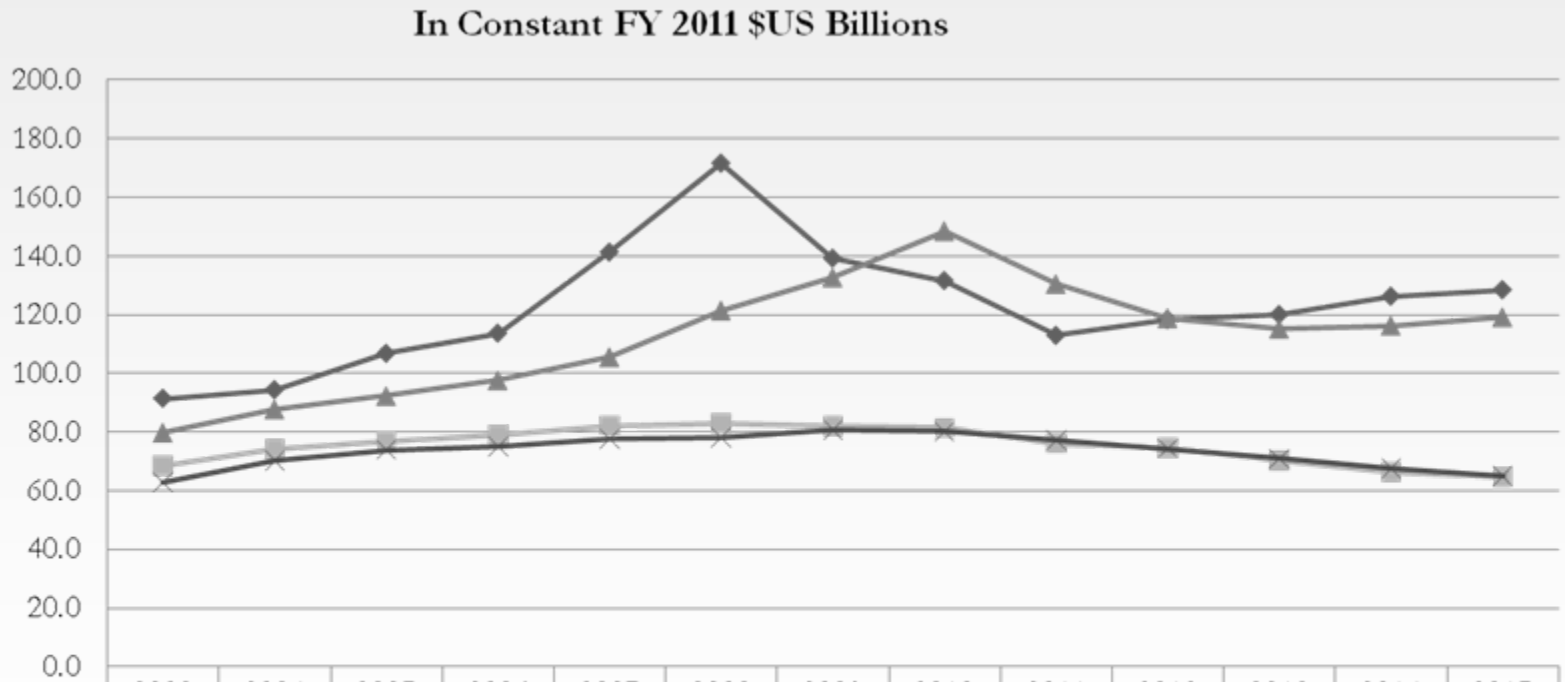
(Continued From Previous Page)

	System	Total estimated cost (dollars in billions)	Secretary's comments	Congressional action
Recommended end of production	C-17	Unspecified	Recommended ending production at 205 aircraft	Conferees recommended $2.5 billion for the procurement of 10 C-17 aircraft, associated spares, support equipment, and training equipment.
	DDG 1000	Unspecified	Recommended ending production at 3 ships	Did not fund additional ships. Appropriated $1.4 billion for completion of third DDG 1000.
	F-22	Unspecified	Recommended ending production at 187 aircraft	Did not fund additional aircraft. Conferees recommended rescission of $383 million in existing funding.
Total		**$126**		

Source: GAO analysis of Secretary's April 2009 statement on fiscal year 2010 budget and fiscal year 2010 DOD authorization and appropriations acts.

Source: GAO, *Observations on Weapon Program Performance and Acquisition Reforms*, 19 May, 2010

"Dancing to the Right": Disguise Procurement Problems by Slipping to Outyears and Cutting RDT&E

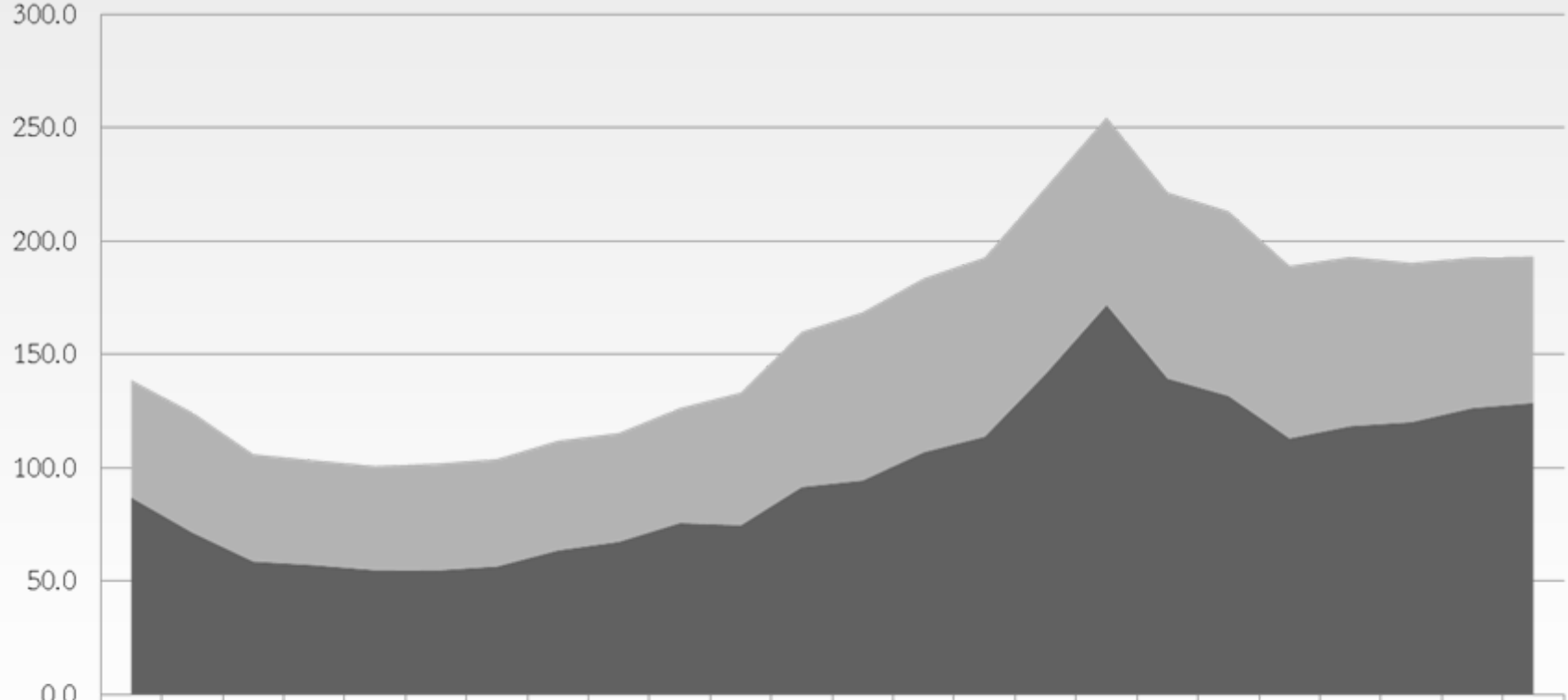


	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
BA Procurement	91.4	94.3	106.7	113.6	141.3	171.7	139.3	131.6	112.9	118.3	120.0	126.2	128.5
BA RDT&E	68.5	74.2	76.7	79.1	82.2	82.8	82.1	81.5	76.1	74.6	70.3	66.4	64.6
BO Procurement	80.0	88.0	92.4	97.7	105.7	121.6	132.7	148.5	130.5	118.9	115.3	116.3	119.2
BO RDT&E	62.9	70.4	73.9	75.0	77.8	78.1	80.8	80.2	77.3	74.4	70.9	67.5	65.1

Source: *FY2011 Green Book*, p. 6-8 and Table 6-11

Paying for Transformation at the Expense of RDT&E

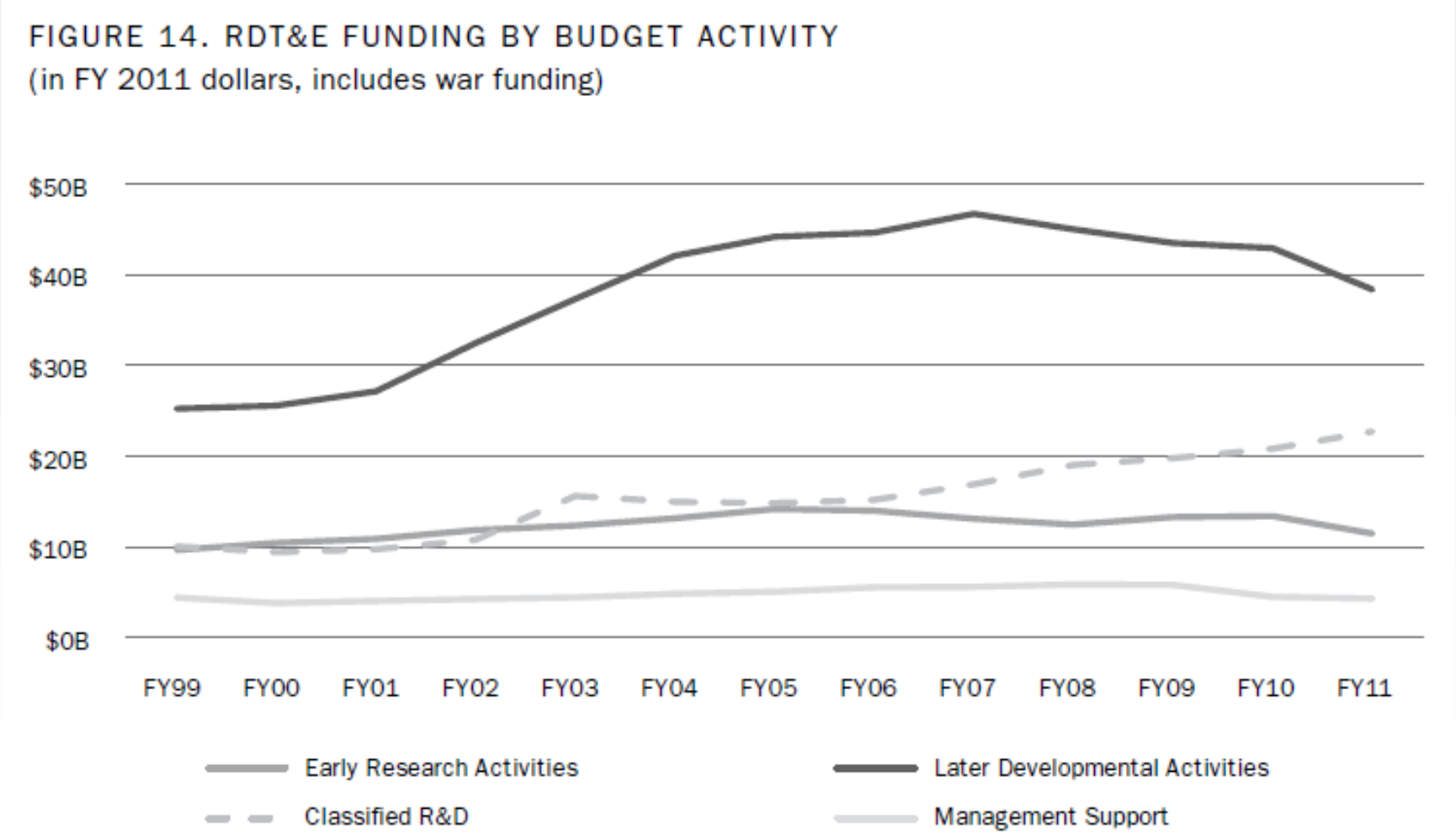
(In Billions of Constant Dollars)



	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
RDT&E	51.8	53.0	47.3	46.3	46.0	47.1	47.4	48.4	48.0	50.7	58.5	68.5	74.2	76.7	79.1	82.2	82.8	82.1	81.5	76.1	74.6	70.3	66.4	64.6
Procurement	86.8	71.3	58.6	56.9	54.7	54.6	56.4	63.5	67.3	75.5	74.6	91.4	94.3	106.	113.	141.	171.	139.	131.	112.	118.	120.	126.	128.

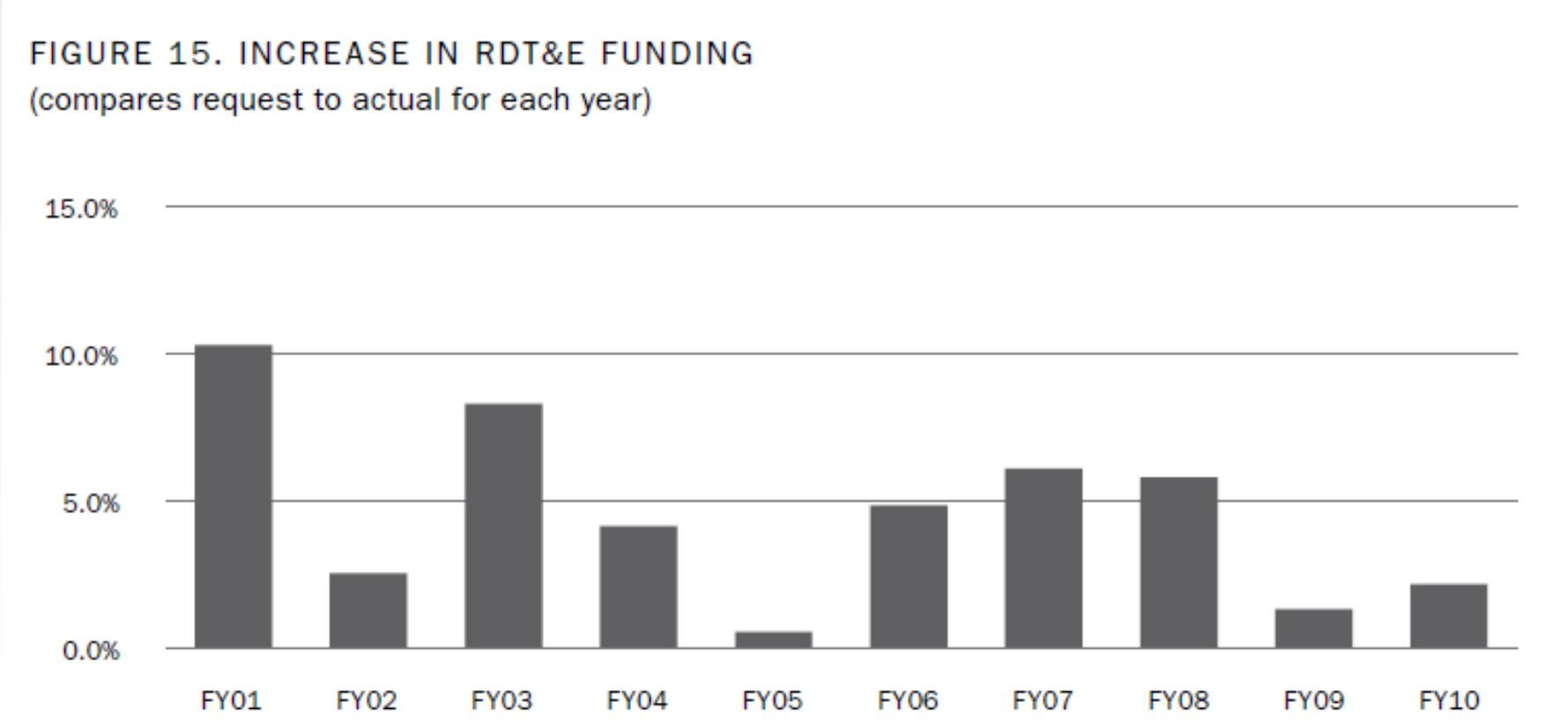
Source: Adapted by Anthony H. Cordesman from data provided by Office of the Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY2011*, Washington, Department of Defense, March 2010, Table 6-8

RDT&E since the Beginning of GWOT Operations



Graph adapted from Harrison, T. "Classified Funding in the FY 2011 Defense Budget Request". Washington DC: CSBA. 2010.

RDT&E since the Beginning of GWOT Operations



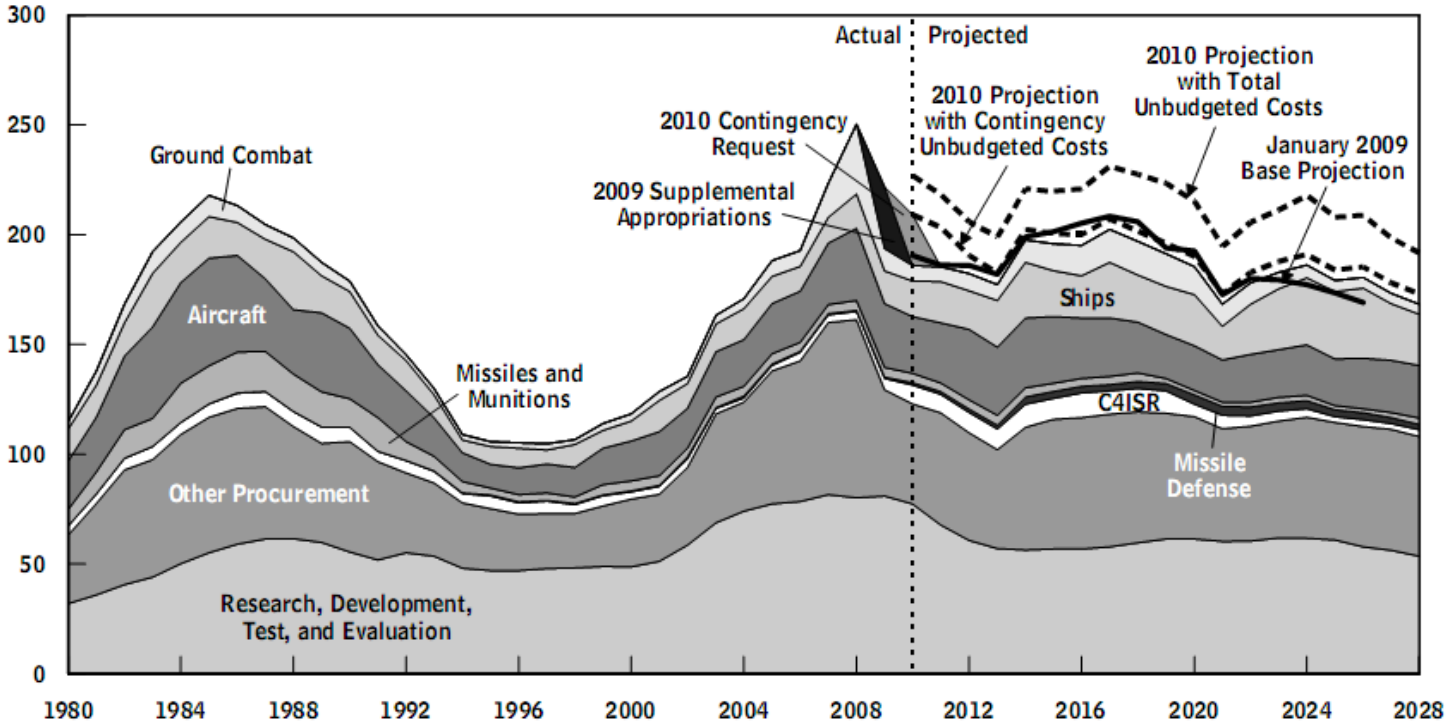
Graph adapted from Harrison, T. "Classified Funding in the FY 2011 Defense Budget Request". Washington DC: CSBA. 2010.

Real World Future Investment Costs Are Much Higher Than DOD Budgets and Plans For

Figure 7.

Resources for Acquisition

(Billions of 2010 dollars)



Source: Congressional Budget Office.

Notes: Only the 2009 supplemental appropriations and the 2010 contingency request are separately identified in this figure.
The supplemental and emergency appropriations for earlier fiscal years are included with the funding categories.
C4ISR = command, control, communications, computers, intelligence, surveillance, and reconnaissance.

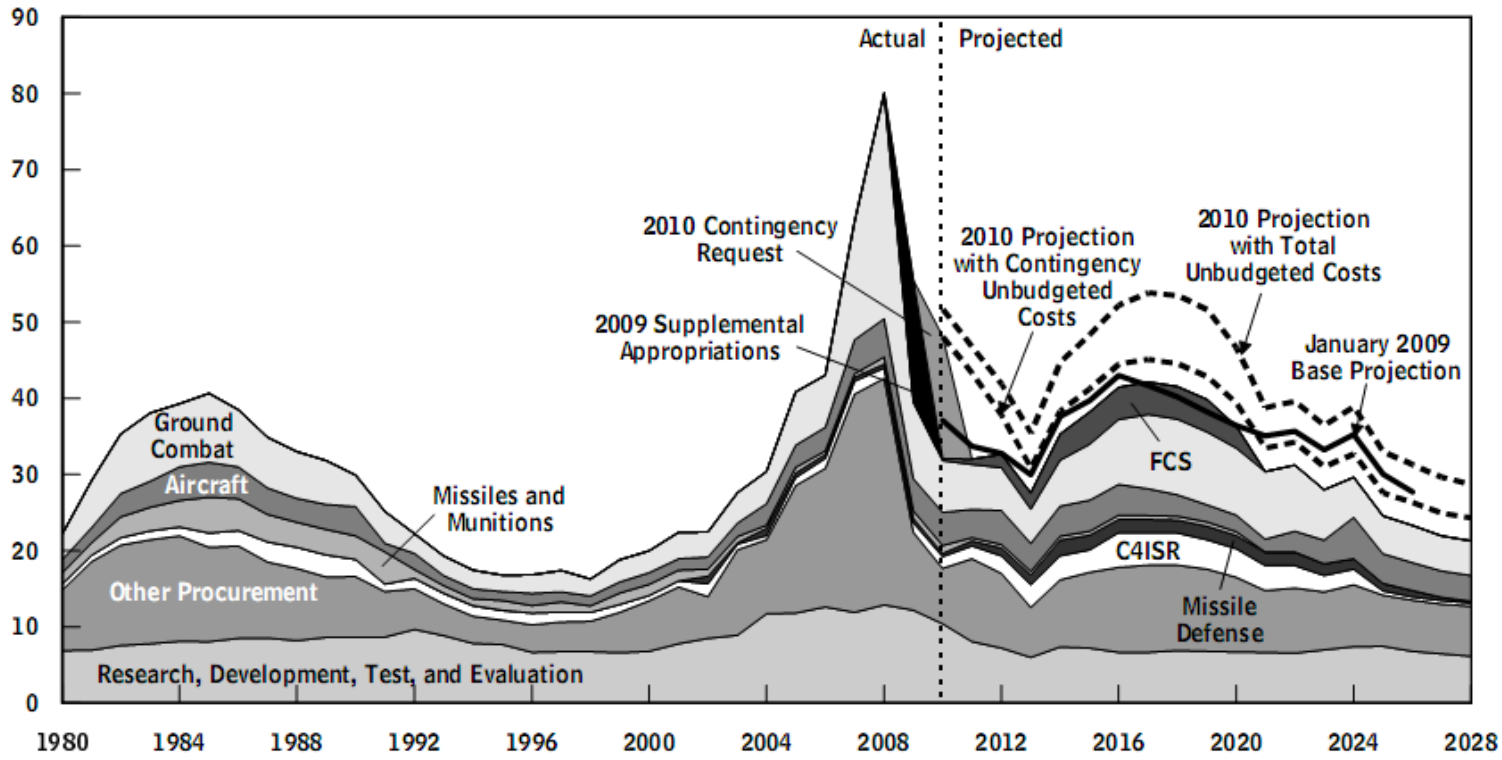
Source: CBO. *Long-Term Implications of the Fiscal Year 2010 Defense Budget*. January 2010. pg 28

The Ongoing Army Investment Crisis

Figure 8.

Resources for Army Acquisition

(Billions of 2010 dollars)



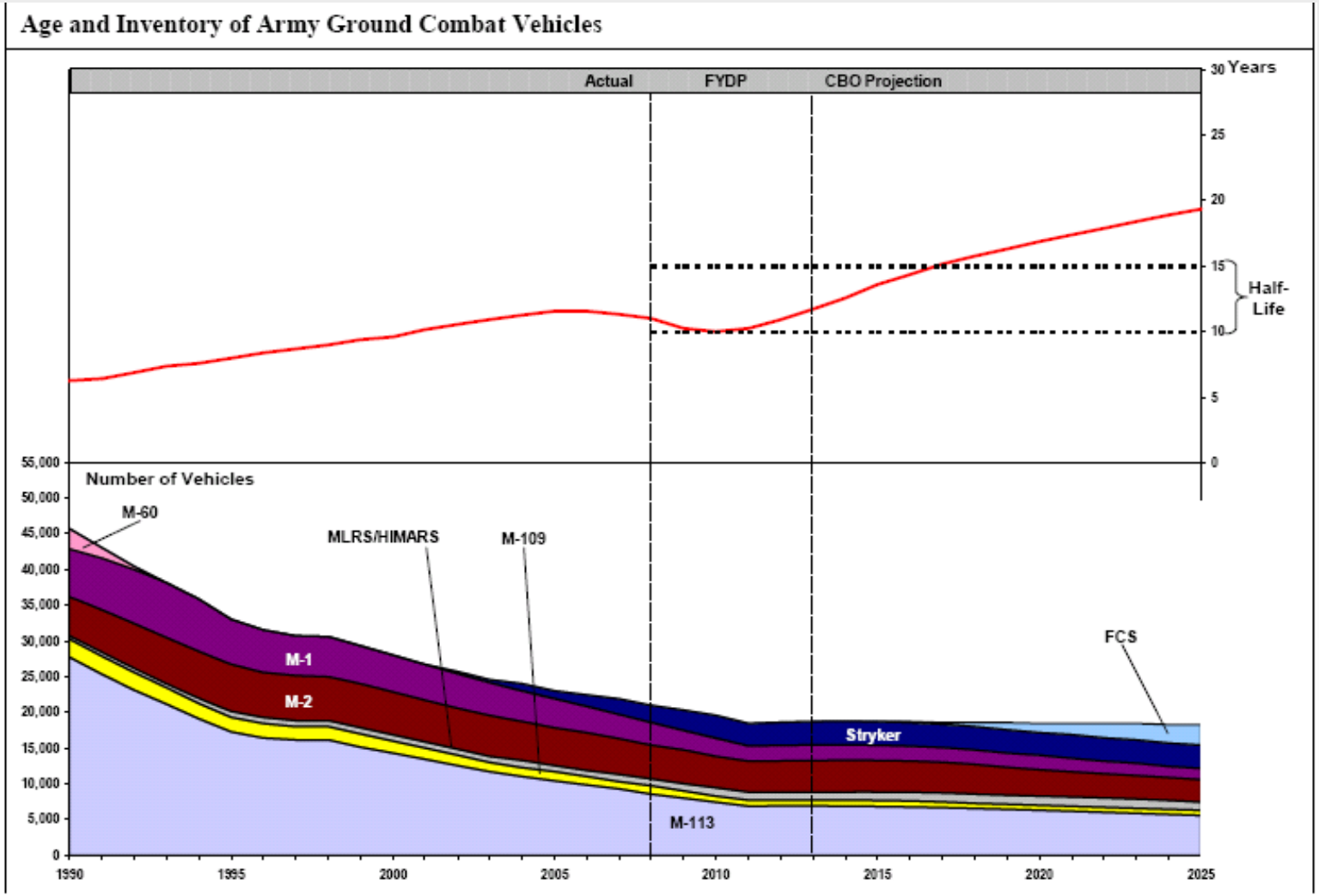
Source: Congressional Budget Office.

Notes: Only the 2009 supplemental appropriations and the 2010 contingency request are separately identified in this figure. The supplemental and emergency appropriations for earlier fiscal years are included with the funding categories.

FCS = Future Combat Systems; C4ISR = command, control, communications, computers, intelligence, surveillance, and reconnaissance.

Source: CBO. *Long-Term Implications of the Fiscal Year 2010 Defense Budget*. January 2010. pg 30

Re-Shaping the Army Vehicle Fleet before FCS Was Killed



Source: CBO, *Long Term Implications of Defense Spending*, March 2008, Figure 3-5.

Future Procurement and Force Transformation Not Properly Funded

- FYDP does not fund adequate RDT&E and procurement funds for current service force and modernization plans.
- CBO estimates show the FYDP calls for major ramp up in procurement in BA, but slips BO to post Bush years.
- Crisis not new, all too apparent in 2007.
- GAO estimated that the Pentagon often underestimated procurement time and costs by 20-50%.
- Top five weapons programs' costs escalated by 22% between their first full estimate and current estimate, from $494 billion to $603 billion (in FY 2009 dollars).
- RDT&E costs are expected to rise 28% between FY 2005 and FY 2009, from $144 billion to $185 billion.
- "Liar's contest" mentality.

$336 Billion, and the Future US Force Posture, at Hazard in Major Procurement Programs

Planned RDT&E and Procurement Funding for Major Defense Acquisition Programs, as of December 2006

Fiscal year 2008 dollars in billions

	Fiscal year					
Program	**2008**	**2009**	**2010**	**2011**	**2012**	**Total**
Ballistic Missile Defense System	$8.9	$9.1	$9.1	$8.9	$8.8	**$44.9**
Joint Strike Fighter	6.7	6.9	8.1	8.4	11.3	**$41.4**
Virginia Class Submarine	2.9	3.7	3.9	3.8	4.7	**$19.0**
Future Combat Systems	3.6	3.2	3.2	3.2	3.7	**$17.0**
V-22 Joint Services Advanced Vertical Lift Aircraft	3.0	3.1	3.1	2.8	3.0	**$15.0**
DDG 1000 Destroyer	3.5	2.8	2.9	2.7	2.6	**$14.4**
Future Aircraft Carrier	3.1	4.6	1.7	0.6	3.4	**$13.4**
F-22A	4.4	4.3	0.5	0.4	0.5	**$10.1**
P-8A Multi-mission Maritime Aircraft	0.9	1.2	2.9	2.7	2.5	**$10.1**
F/A-18 EF	2.1	1.7	1.9	1.6	1.5	**$8.8**
Funding for Top 10 MDAP programs	39.1	40.6	37.3	35.2	42.0	**$194.2**
Funding for other 85 MDAP programs	33.2	31.5	26.9	25.4	24.1	**$141.1**
Total	**$72.3**	**$72.1**	**$64.2**	**$60.6**	**$66.1**	**$335.3**
Top 10 MDAP programs (percentage of total)	54	56	58	58	64	**58**

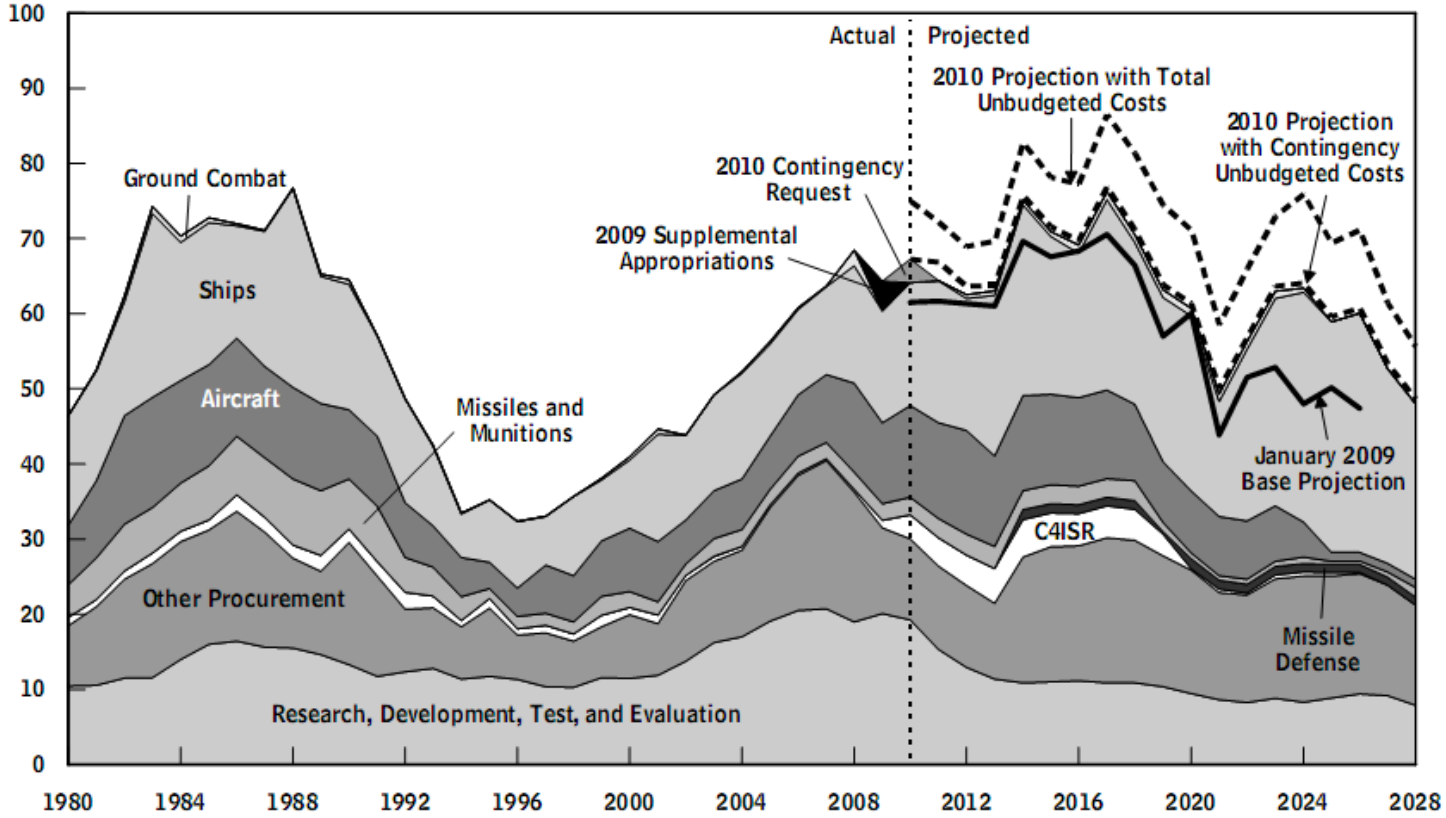
Source: GAO, *Defense Acquisitions – Assessment of Selected Weapon programs*, GAO-08-467SP, March 2008, pp. 10-11.

The Ongoing Navy-Marine Corps Investment Crisis

Figure 9.

Resources for Navy and Marine Corps Acquisition

(Billions of 2010 dollars)

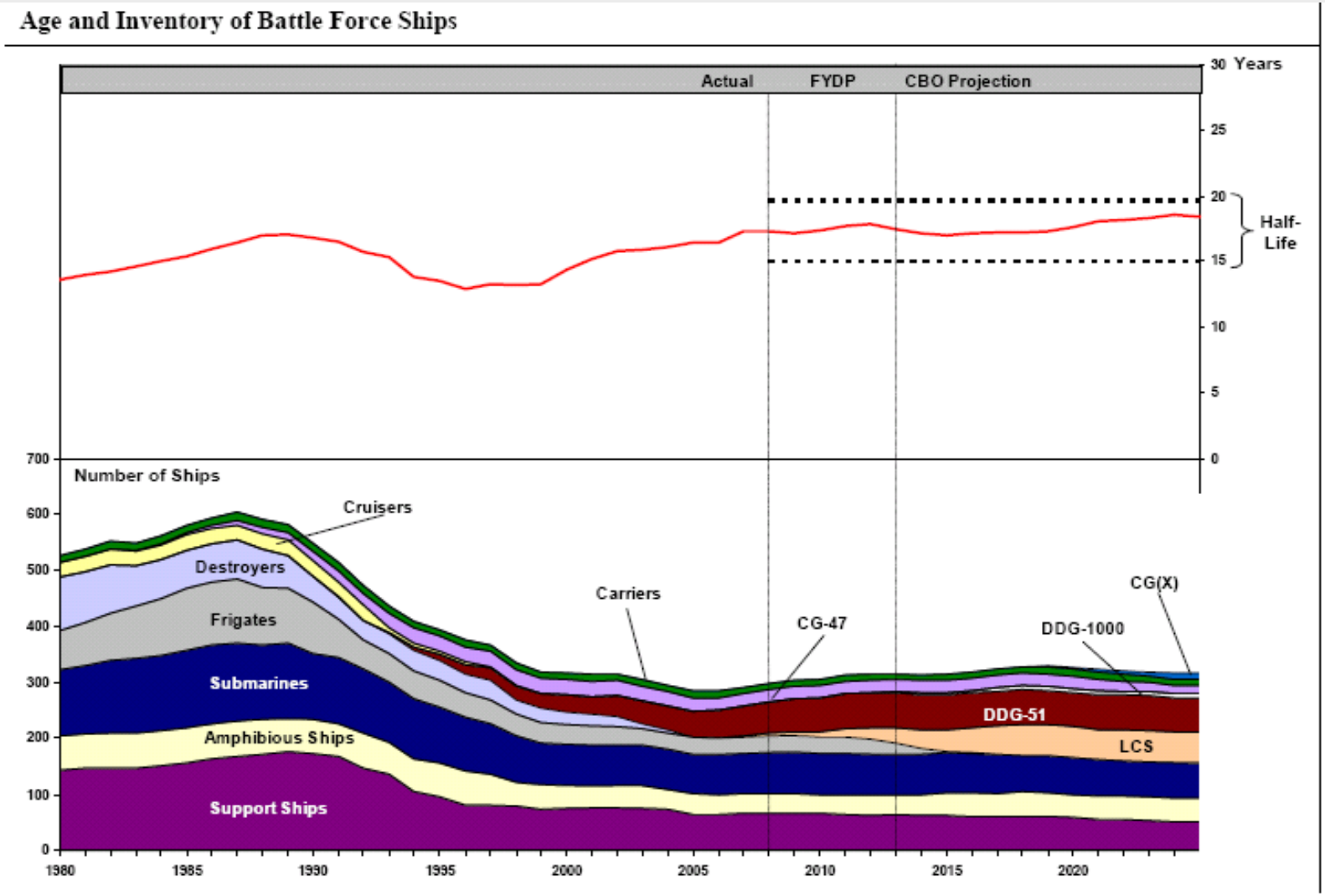


Source: Congressional Budget Office.

Notes: Only the 2009 supplemental appropriations and the 2010 contingency request are separately identified in this figure.
The supplemental and emergency appropriations for earlier fiscal years are included with the funding categories.
C4ISR = command, control, communications, computers, intelligence, surveillance, and reconnaissance.

Source: CBO. *Long-Term Implications of the Fiscal Year 2010 Defense Budget*. January 2010. pg 30

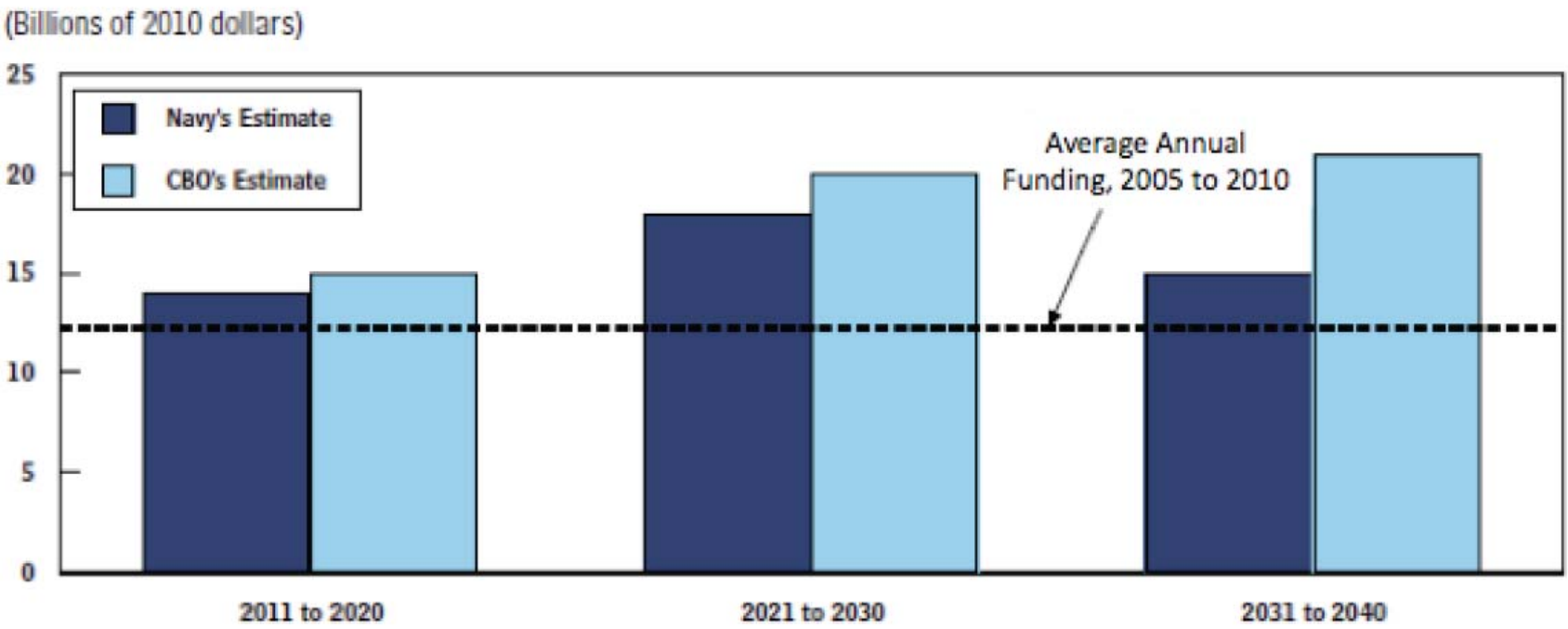
Unilateral Naval Disarmament by the US Navy: Creating an Unaffordable Fleet in FY2009



Source: CBO, *Long Term Implications of Defense Spending*, March 23 2008, Figure 3-11.

Still a Self-Sinking Fleet?

- The Navy's plan would purchase 276 ships over the next 30 years, not enough to build to a 322-ship Navy
- That plan would also require more appropriations for ship construction than the Navy has recently received



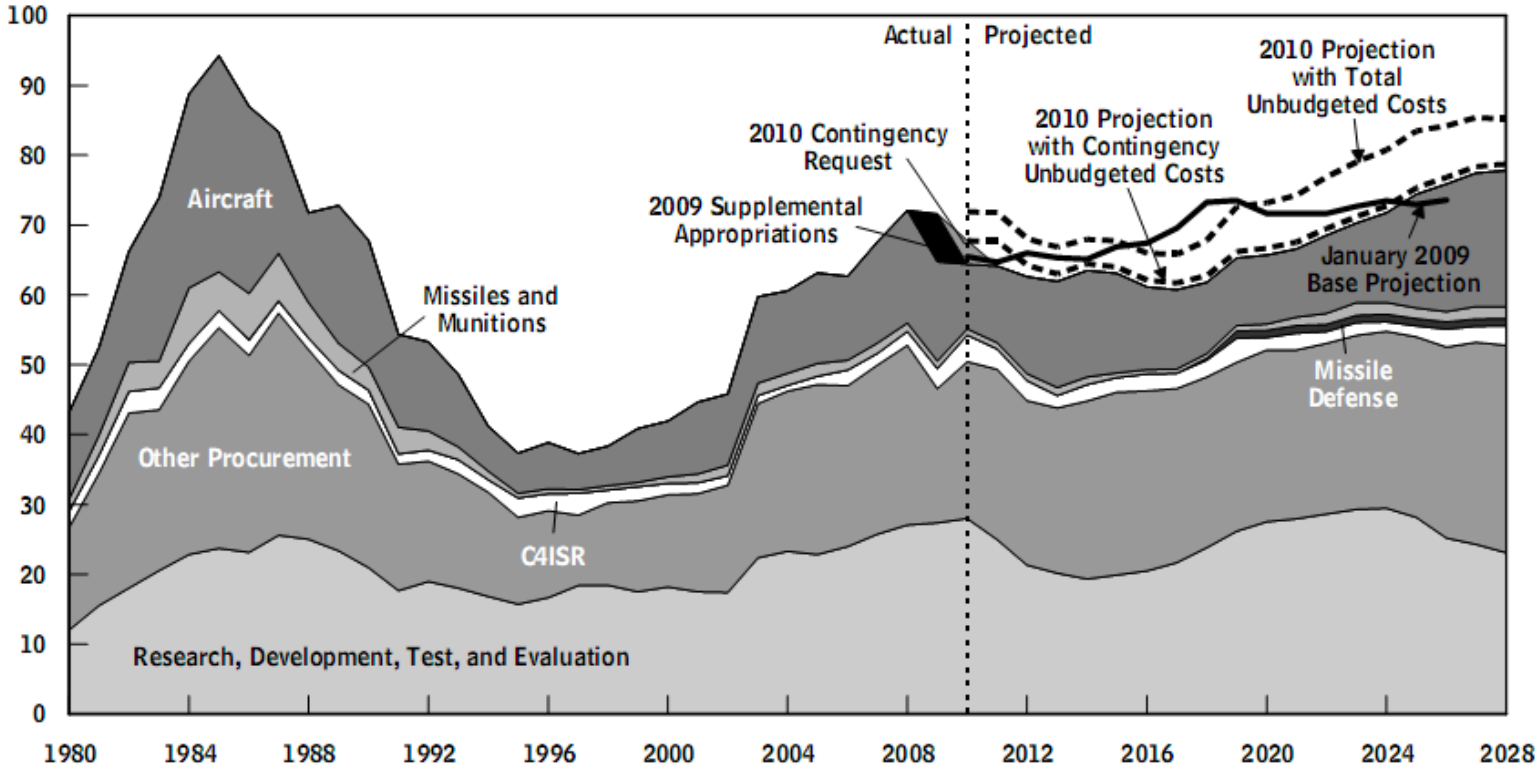
Source: Source: Matthew Goldberg, Acting Assistant Director for National Security, "Discretionary Defense Spending," Presentation to the National Commission on Fiscal Responsibility and Reform, CBO, June 9, 2010, p. 9

The Ongoing Air Force Investment Crisis

Figure 10.

Resources for Air Force Acquisition

(Billions of 2010 dollars)



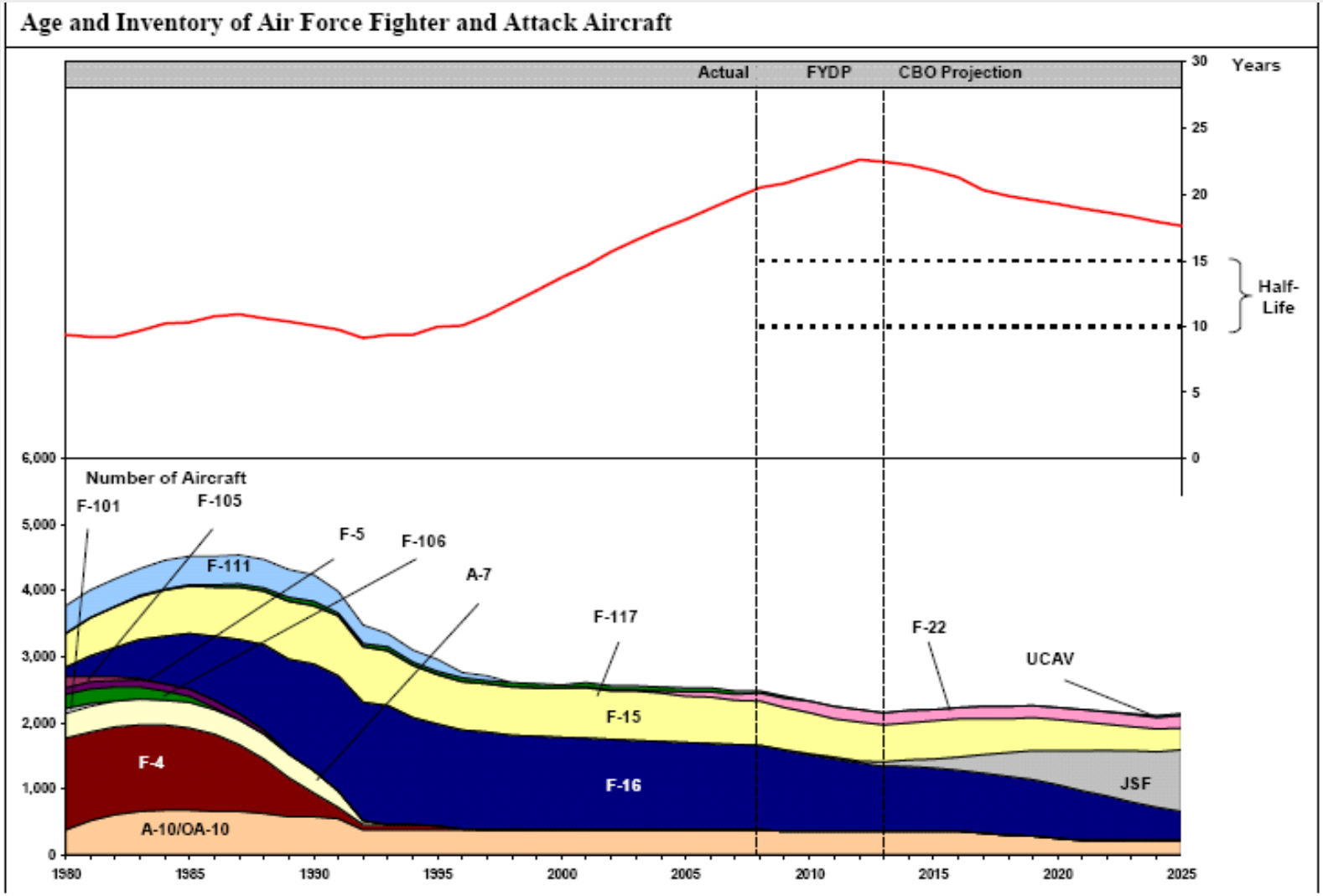
Source: Congressional Budget Office.

Notes: Only the 2009 supplemental appropriations and the 2010 contingency request are separately identified in this figure.
The supplemental and emergency appropriations for earlier fiscal years are included with the funding categories.

C4ISR = command, control, communications, computers, intelligence, surveillance, and reconnaissance.

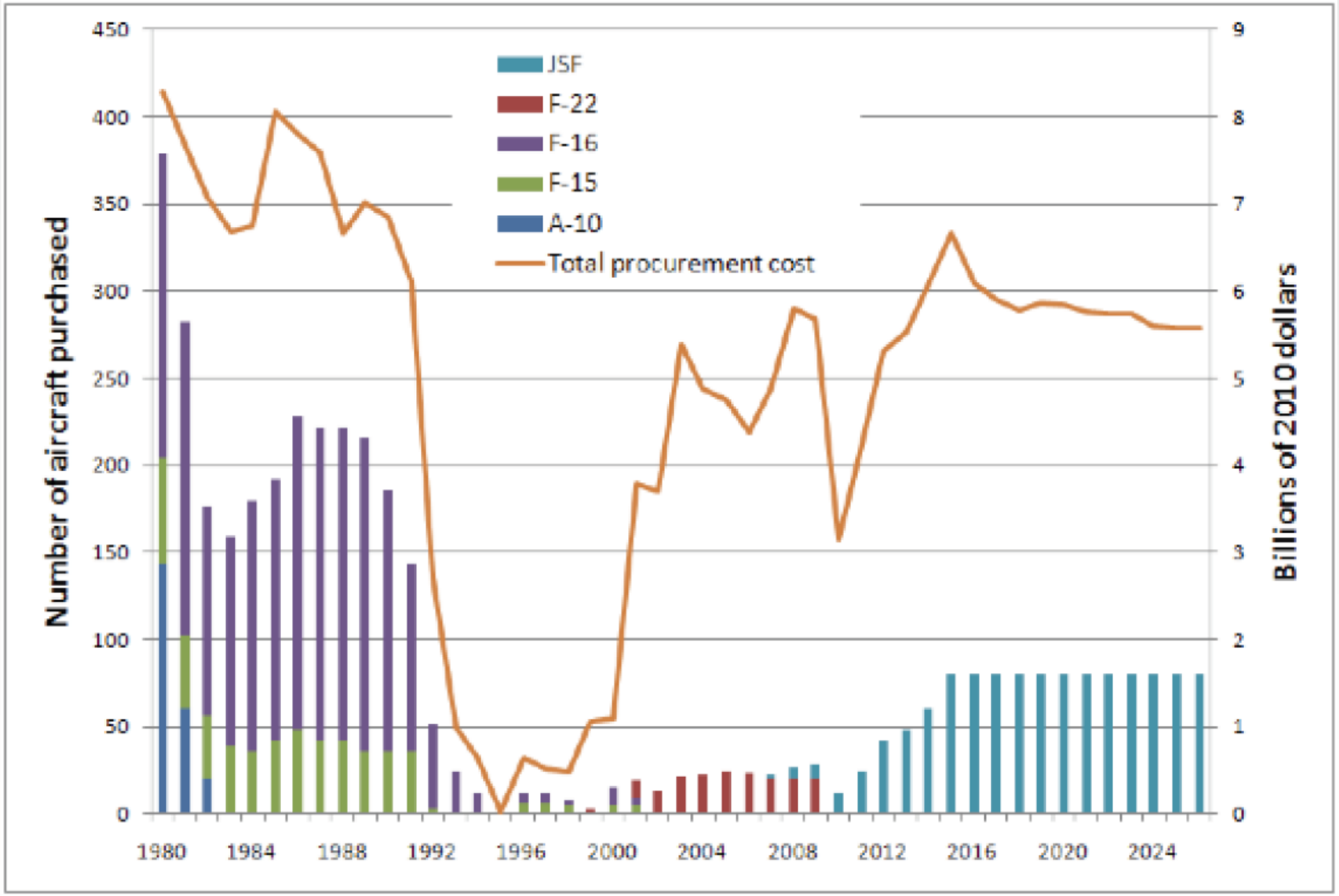
Source: CBO. *Long-Term Implications of the Fiscal Year 2010 Defense Budget*. January 2010. pg 30

Heading Towards an Air Force of One (Aircraft) before F-22 Production Was Cancelled



Source: CBO, *Long Term Implications of Defense Spending*, March 23 2008, Figure 3-21.

Still Heading Towards an Air Force of One (Aircraft) ?



Source: Matthew Goldberg, Acting Assistant Director for National Security, "Discretionary Defense Spending," Presentation to the National Commission on Fiscal Responsibility and Reform, CBO, June 9, 2010, p. 7

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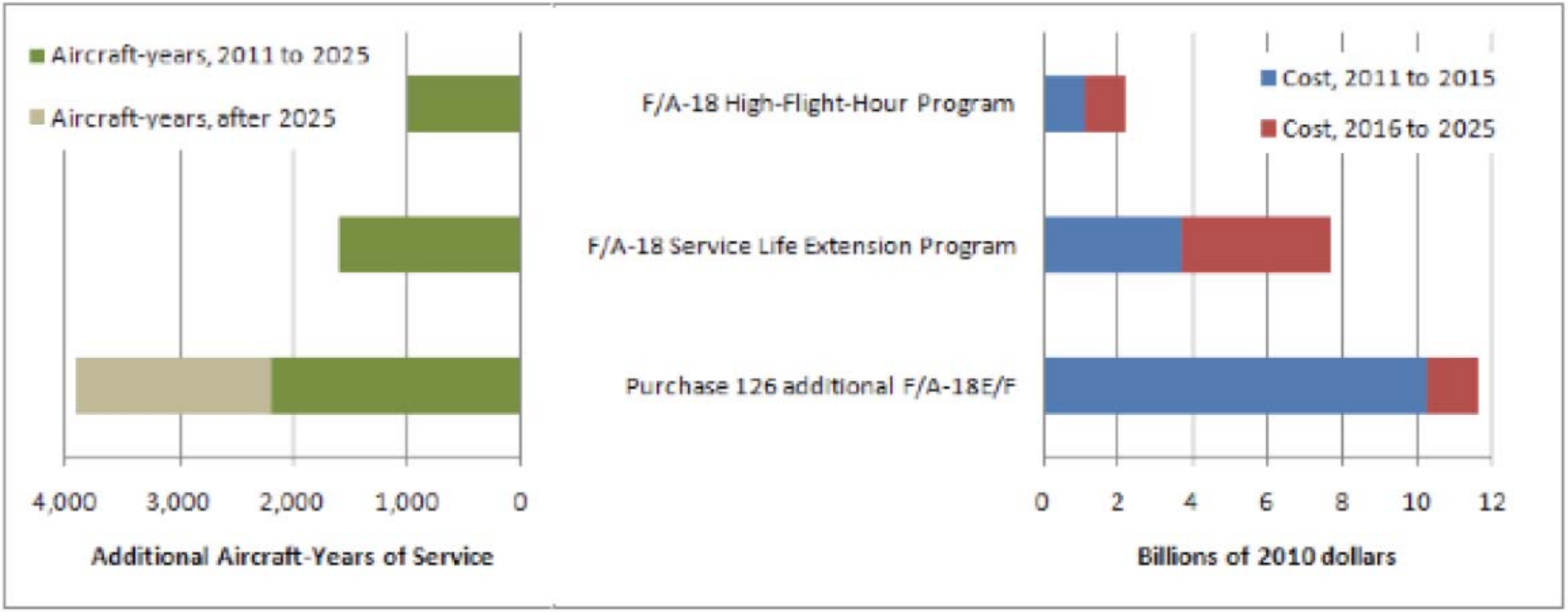
Options for Bridging the Navy/Marine Corps Fighter Gap

With the Joint Strike Fighter (JSF) program experiencing schedule delays, the Navy / Marine Corps may have to spend more in the near-term to maintain their fighter inventory levels.



Source: Matthew Goldberg, Acting Assistant Director for National Security, "Discretionary Defense Spending," Presentation to the National Commission on Fiscal Responsibility and Reform, CBO, June 9, 2010, p. 8

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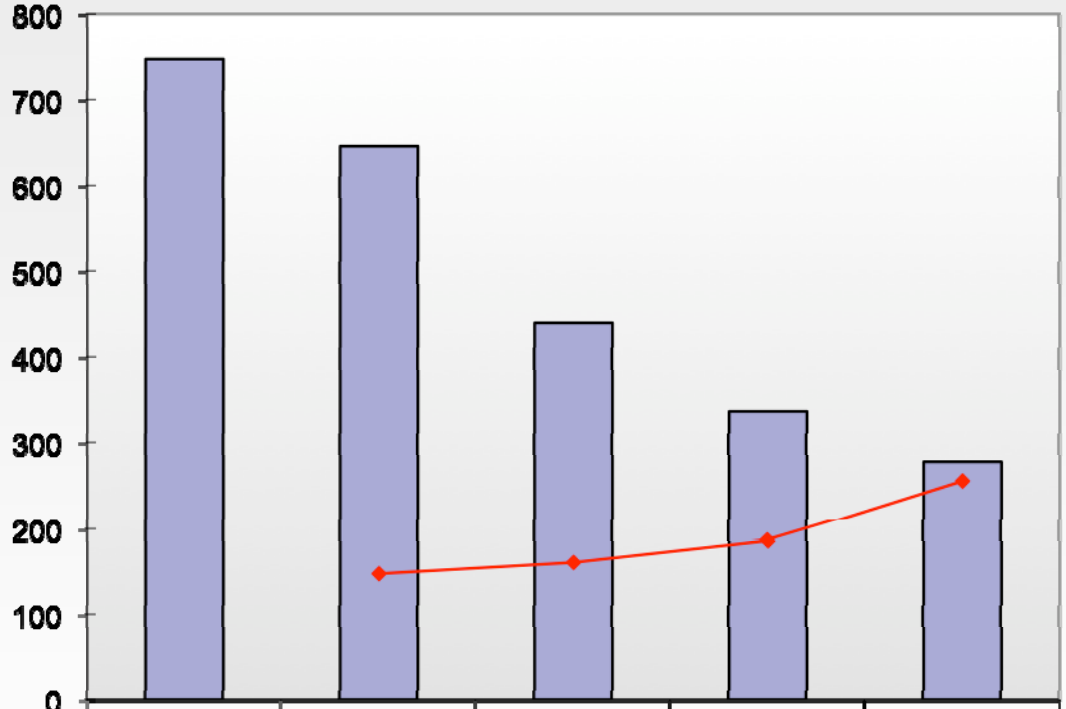
The F-22: A High Technology Force Shrinker



	1986	1991	1993	1997	2003
Aircraft Quantity	750	648	442	339	279
Program acquisition unit cost (in $millions)		149	162	187	257

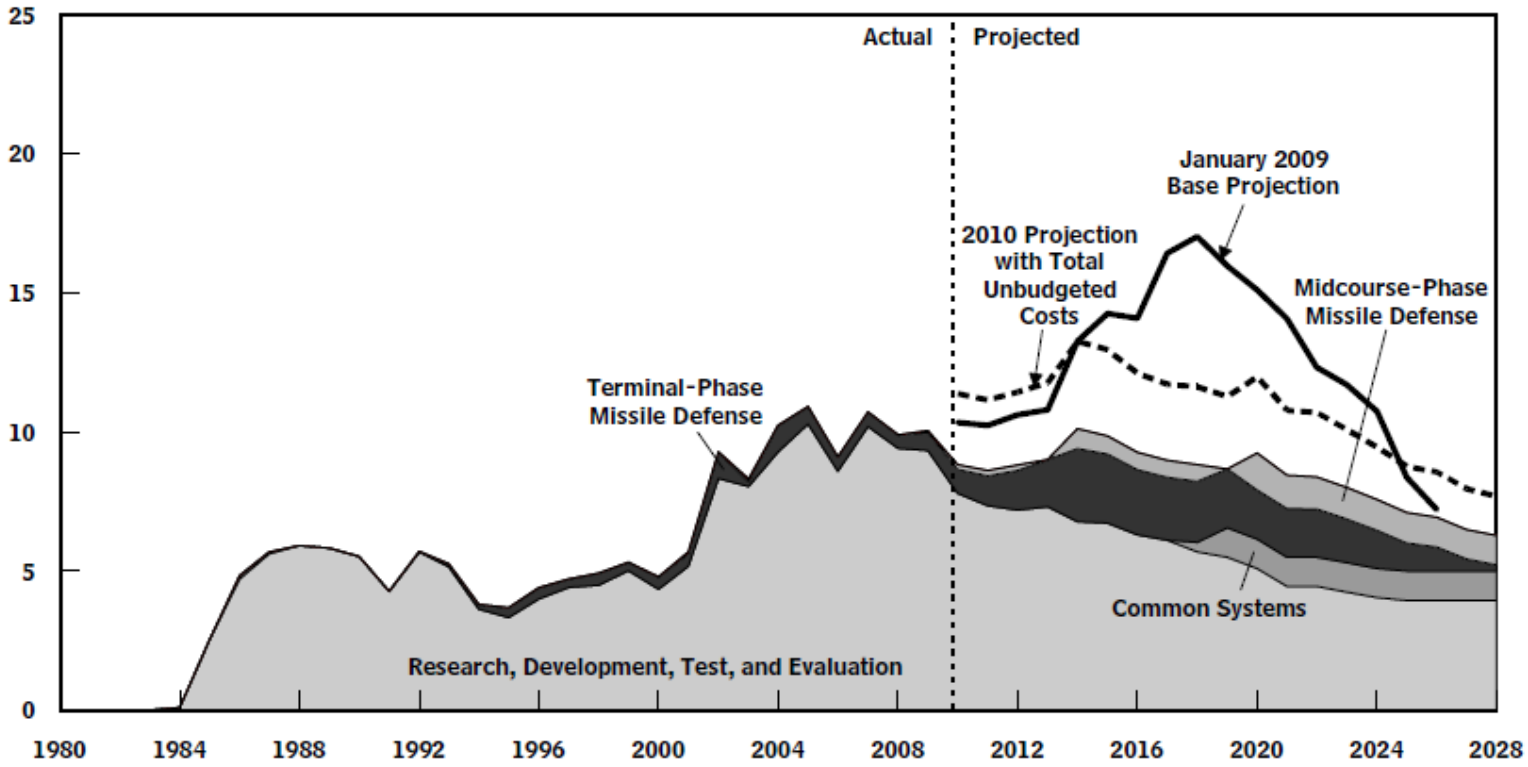
Source: Adapted from *Tactical Aircraft: Air Force Still Needs Business Case to Support F/A-22 Quantities and Increased Capabilities*. Government Accountability Office Report to Congressional Committees. 15 March 2005.

Is Missile Defense Affordable?

Figure 12.

Resources for Missile Defense Acquisition

(Billions of 2010 dollars)



Source: Congressional Budget Office.

Note: The data include research, development, test, and evaluation and procurement of missile defense systems by the Missile Defense Agency and the Departments of the Army, Navy, and Air Force.

Source: CBO. *Long-Term Implications of the Fiscal Year 2010 Defense Budget*. January 2010. pg 39

Rising Military and Veterans' Entitlement Costs—Creating an Unaffordable Military?

KEY POINTS:

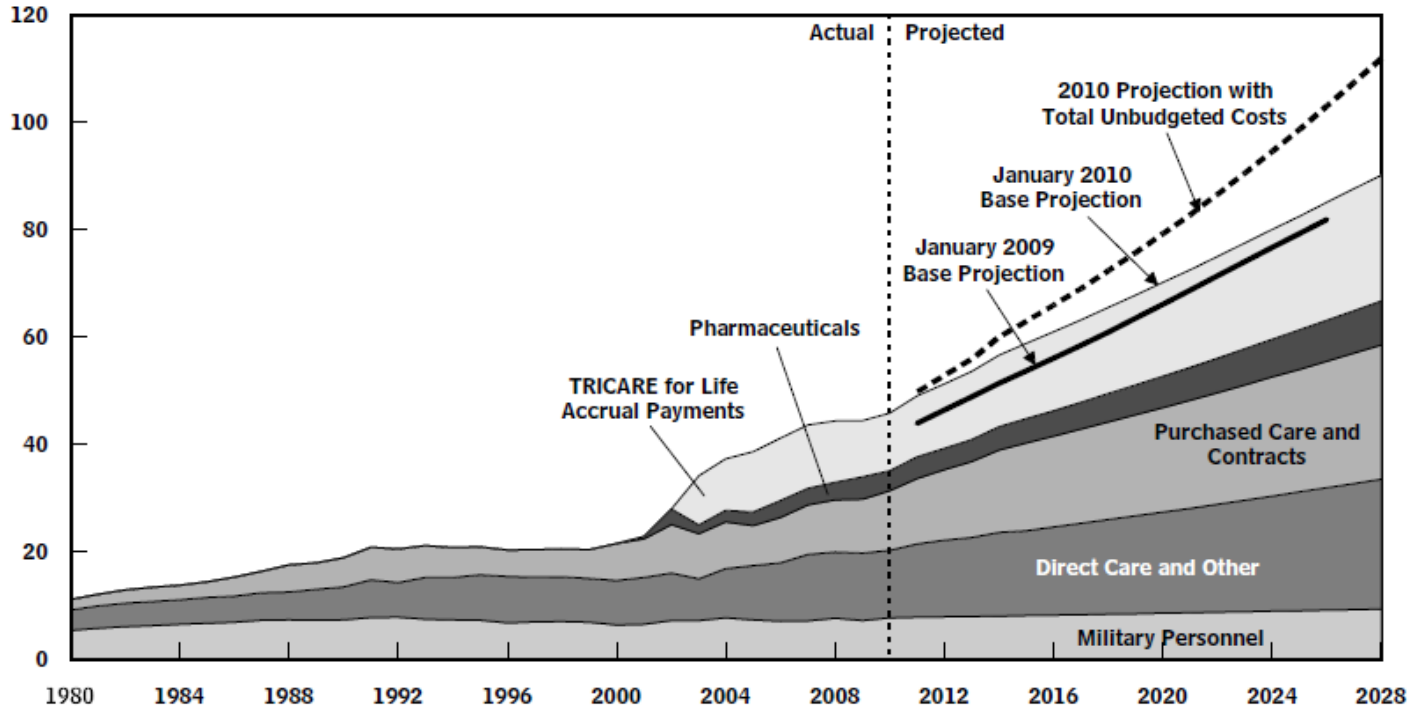
1. The armed forces may see extreme cost escalation in the near-term and long-term due to rapid growth in health service costs.
2. Costs due to health services are projected to rise in both real terms and as a percentage of DOD total outlays.
3. Costs associated with veterans' entitlements are also likely to increase as more and more troops both become eligible for and actually utilize veterans' benefits as a result of many years of sustained deployment stress.
4. These costs are mandatory; thus, without reform, they have the capacity to crowd-out other titles in the Pentagon's budget.
5. In turn, these costs may compel the Pentagon to cut military end strengths, leaving the military less capable of executing manpower intensive Counterinsurgency and humanitarian operations.

The Unaffordable Military Medical Burden? CBO Estimate

Figure 5.

Resources for the Military Medical System

(Billions of 2010 dollars)

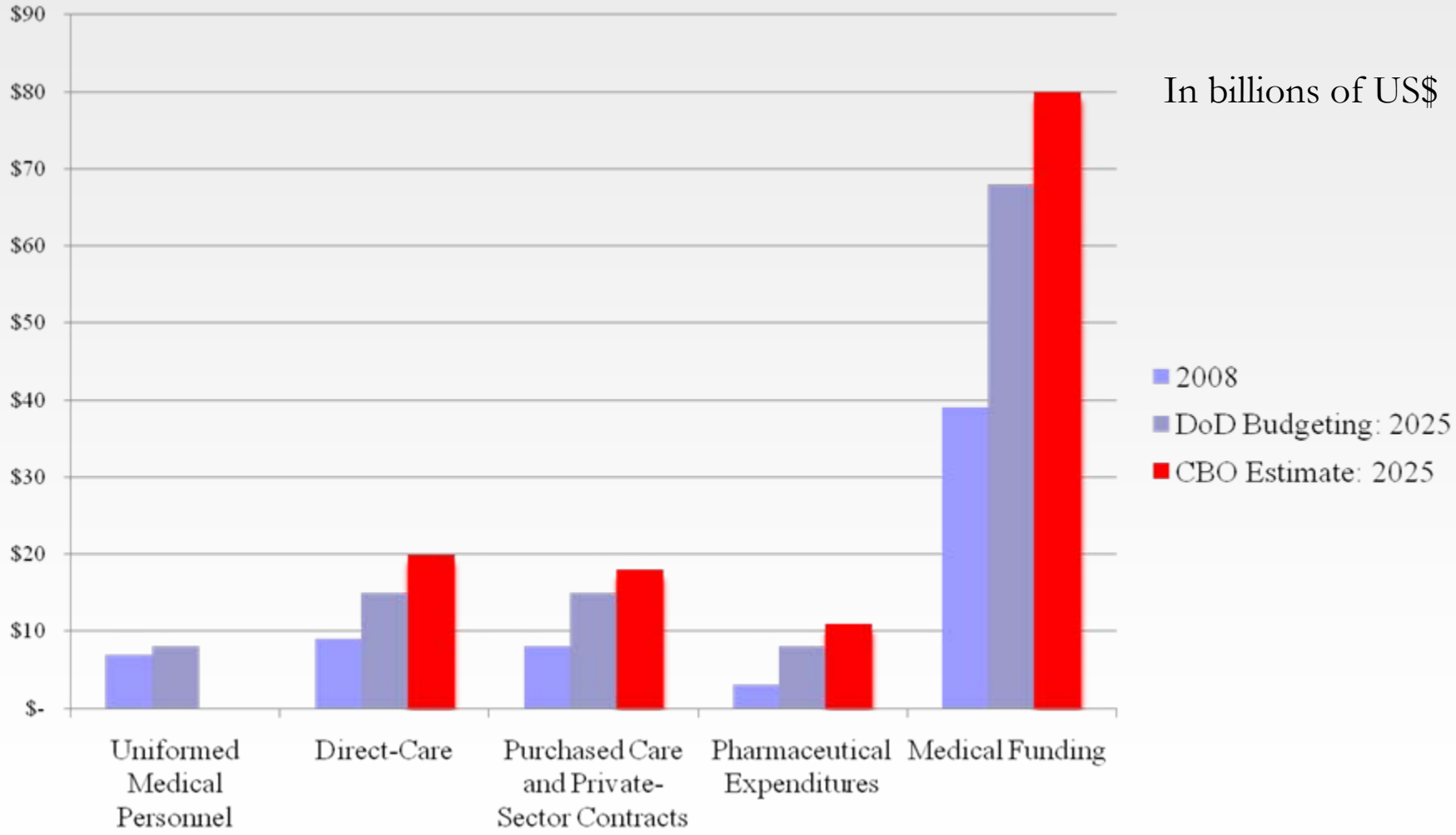


Source: Congressional Budget Office.

Note: Before 2001, pharmaceutical costs were not separately identifiable but were embedded in the costs of two categories, "Purchased Care and Contracts" and "Direct Care and Other." Starting in 2001, most pharmaceutical costs are separately identifiable, but some of those costs may be embedded in the category "TRICARE for Life Accrual Payments."

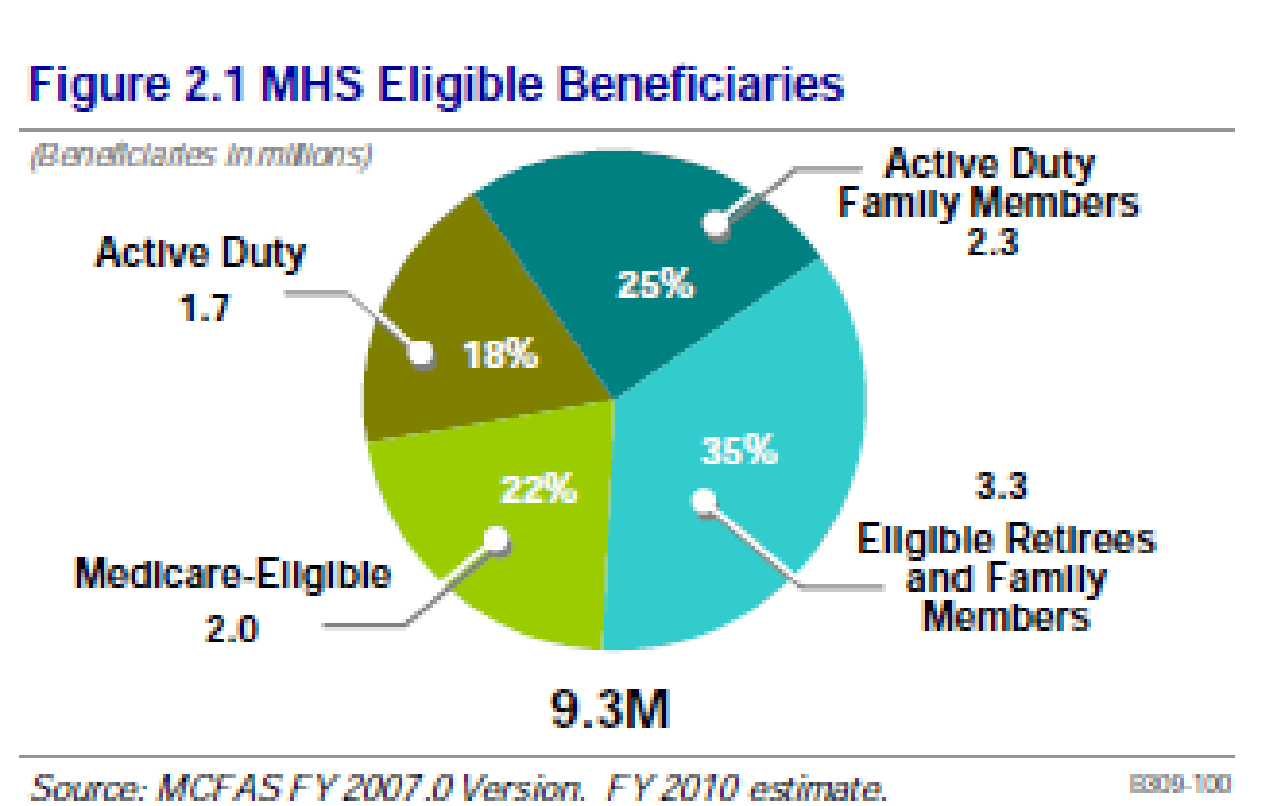
Source: CBO. *Long-Term Implications of the Fiscal Year 2010 Defense Budget*. January 2010. pg 23

The Unaffordable Military Medical Burden? Survey of Possible Trends in Medical Expenditures



Graph adapted by Anthony Cordesman from data found in: CBO, *Long Term Implications of Defense Spending,* March 2008, p 9.

The FY 2010 Request for Health Services: Smallest Amounts to Active-Duty Soldiers



Graph adapted from: US Dept. of Defense. "Fiscal Year 2010 Budget Request: Summary Justifications". Dept of the Comptroller: Washington DC. May 2009.

The Unaffordable Military Medical Burden? CBO Estimate

- CBO estimates that total real medical funding will increase by 97 percent, from $46 billion in 2010 to $90 billion by 2028. Real medical funding including potential unbudgeted costs could more than double, reaching $112 billion by 2028, CBO projects.
- Accrual payments for beneficiaries over age 65 will make up more than 29 percent of the increase in medical funding. CBO projection indicates that by 2028, accrual payments will more than twice as large in real terms as they are currently, reaching a total of $23.4 billion. (Note that payments are made out of the accrual fund to cover pharmaceuticals, purchased care, and direct care for Medicare-eligible beneficiaries. The amounts spent on those beneficiaries are therefore excluded from the remaining categories described below).
- Pharmaceutical expenditures are projected to more than double, from $3.7 billion in 2010 to $8.2 billion in 2028.
- Purchased care and private-sector contracts are projected to grow by 124 percent in real terms, from $8 billion in 2008 to $15 billion in 2025. Funding for that category including cost risk could increase by 117 percent in real terms, reaching $18 billion in 2025.

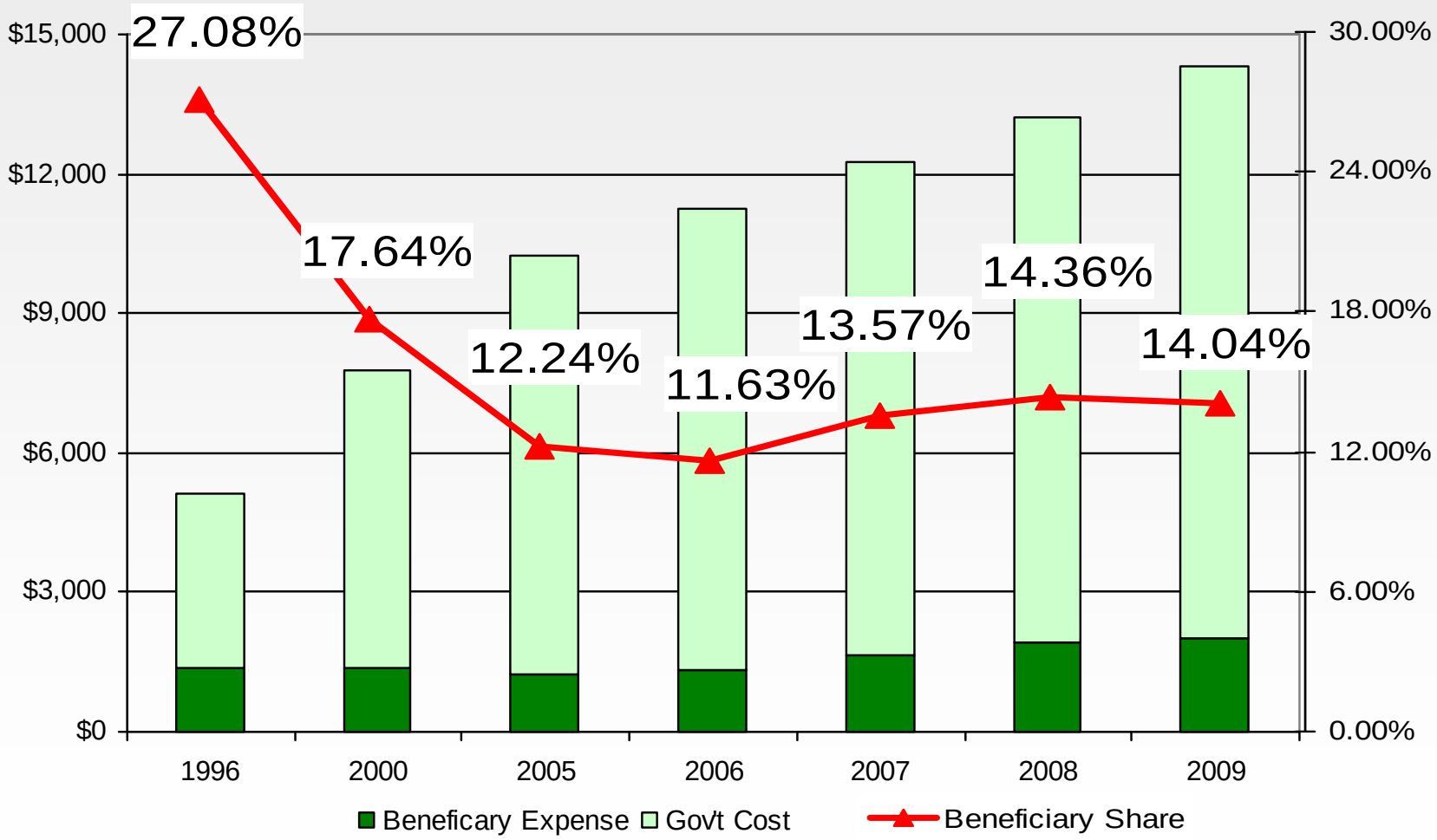
Source: CBO, *Long Term Implications of Defense Spending,* March 2008. CBO, *Long Term Implications of Defense Spending,* March 2008, p 9.
CBO. *Long-Term Implications of the Fiscal Year 2010 Defense Budget*. January 2010. pg 22-24

The Unaffordable Military Medical Burden? CBO Estimate

- The category that comprises the military's direct-care system and other medical funding is projected to grow by nearly 60 percent in real terms, from $9 billion in 2008 to $15 billion in 2025. If costs grew more quickly than DOD has anticipated, funding in that category could rise by 114 percent in real terms, reaching $20 billion in 2025, and contributing (along with other factors) to the dashed line labeled "With Unbudgeted Costs" in the figure.
- CBO anticipates that funding for uniformed medical personnel will grow by 14 percent in real terms by 2025 as a result of pay increases that outpace inflation. CBO expects real funding in the military personnel category to grow from $7 billion on 2006 to $8 billion in 2025.

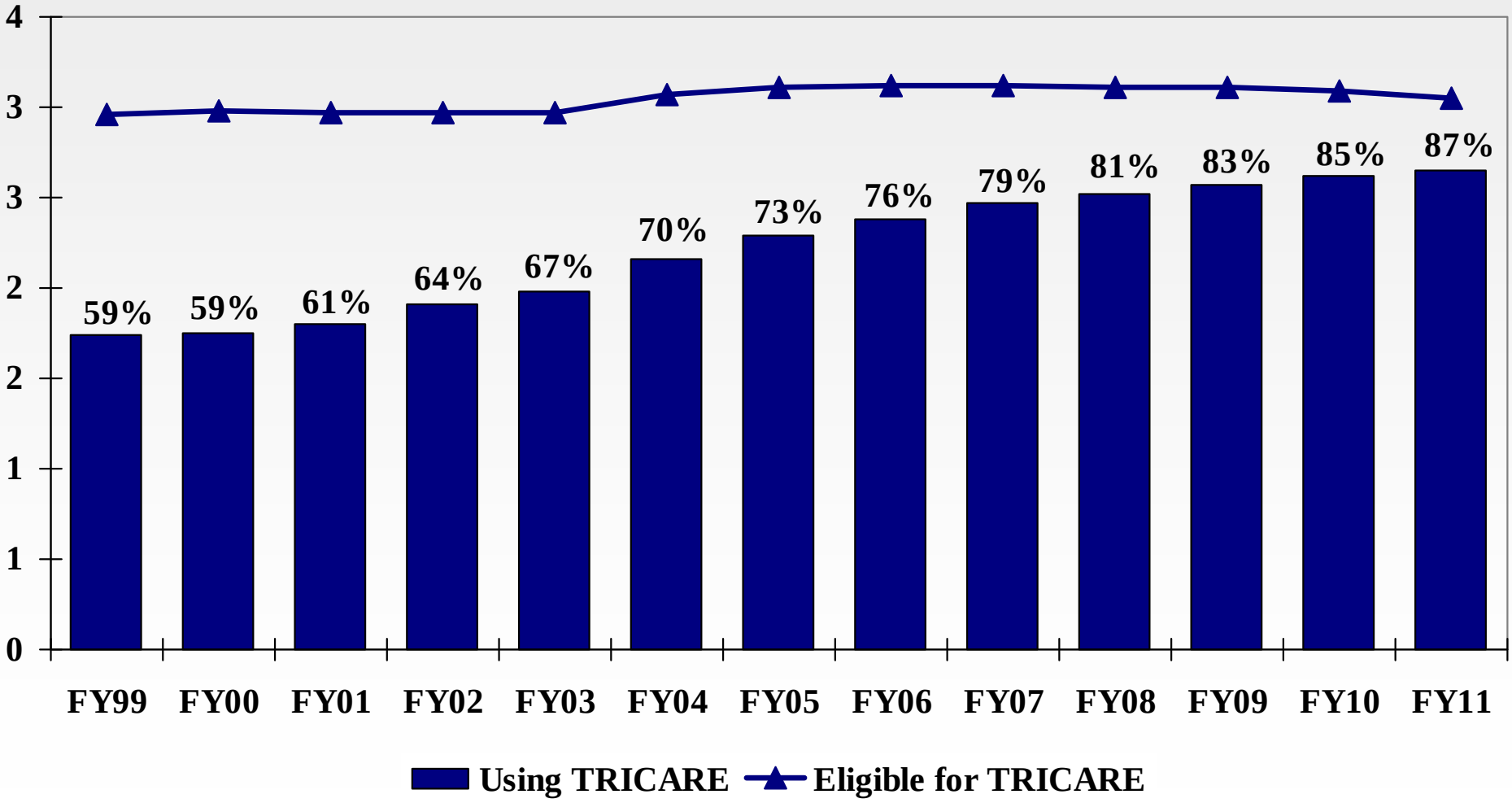
Source: CBO, *Long Term Implications of Defense Spending,* March 2008, p 9.

The Government Pays for the Vast Majority of Healthcare Services: Need to Increase Premiums?



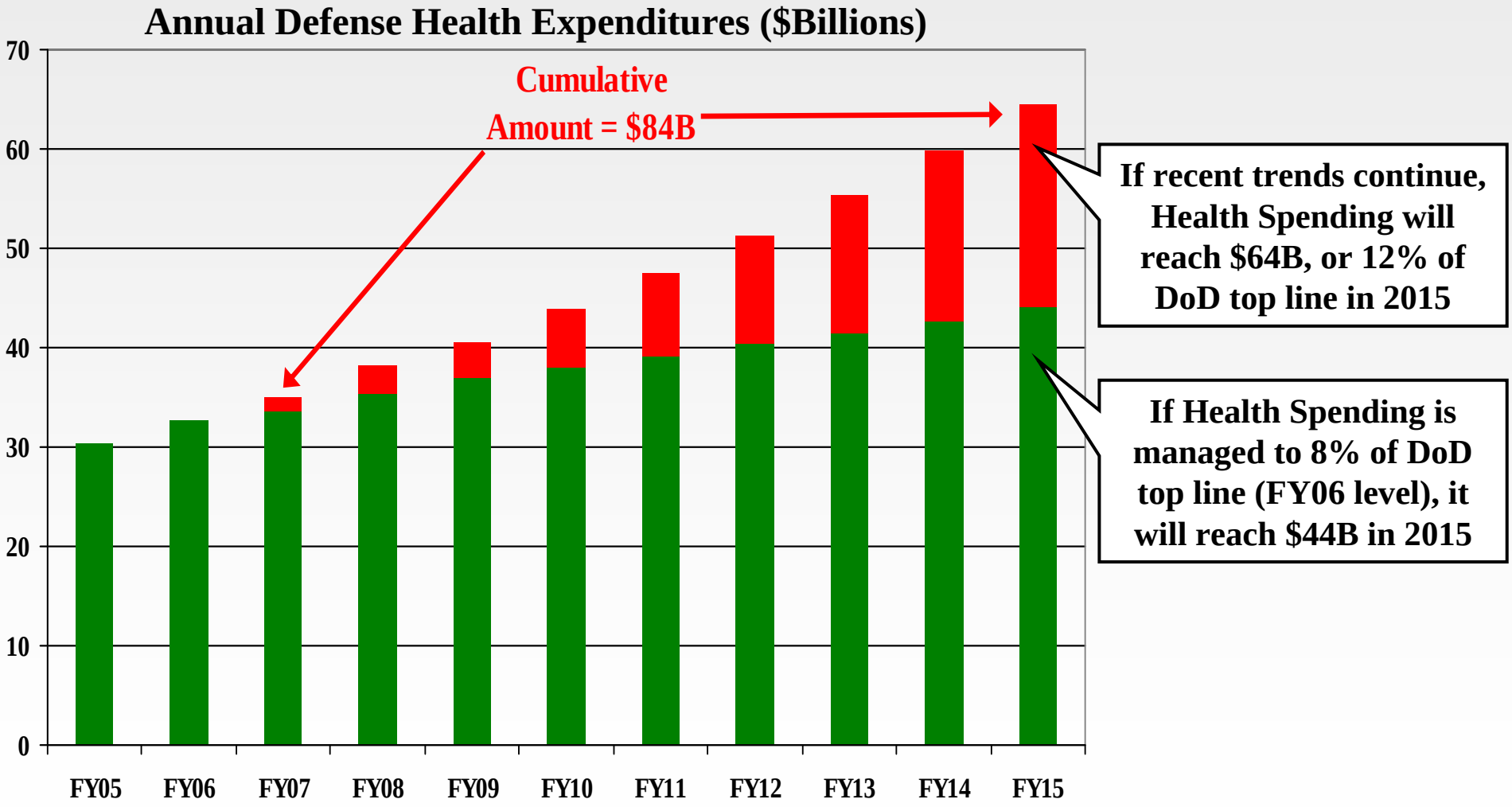
Graph adapted from: Chu, David S. "Transforming Military Medicine". Presentation to the National Defense University. July 2007.

Retirees are Increasingly Using TRICARE: Costs will Continue to Escalate



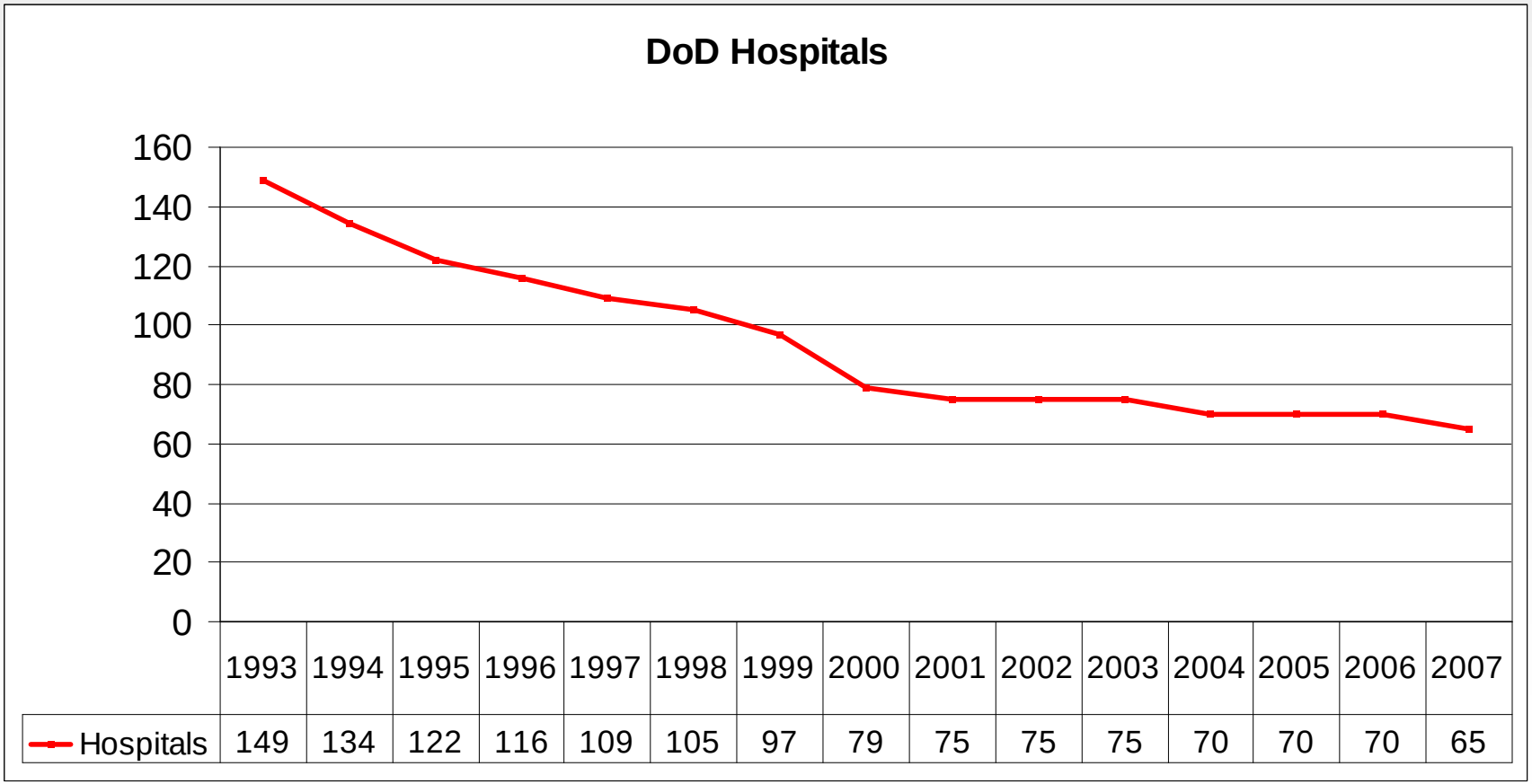
Graph adapted from: Chu, David S. "Transforming Military Medicine". Presentation to the National Defense University. July 2007.

Healthcare Costs May Consume Significant Portions of the Pentagon's Budget



Observations based upon and graph adapted from: Chu, David S. "Transforming Military Medicine". Presentation to the National Defense University. July 2007.

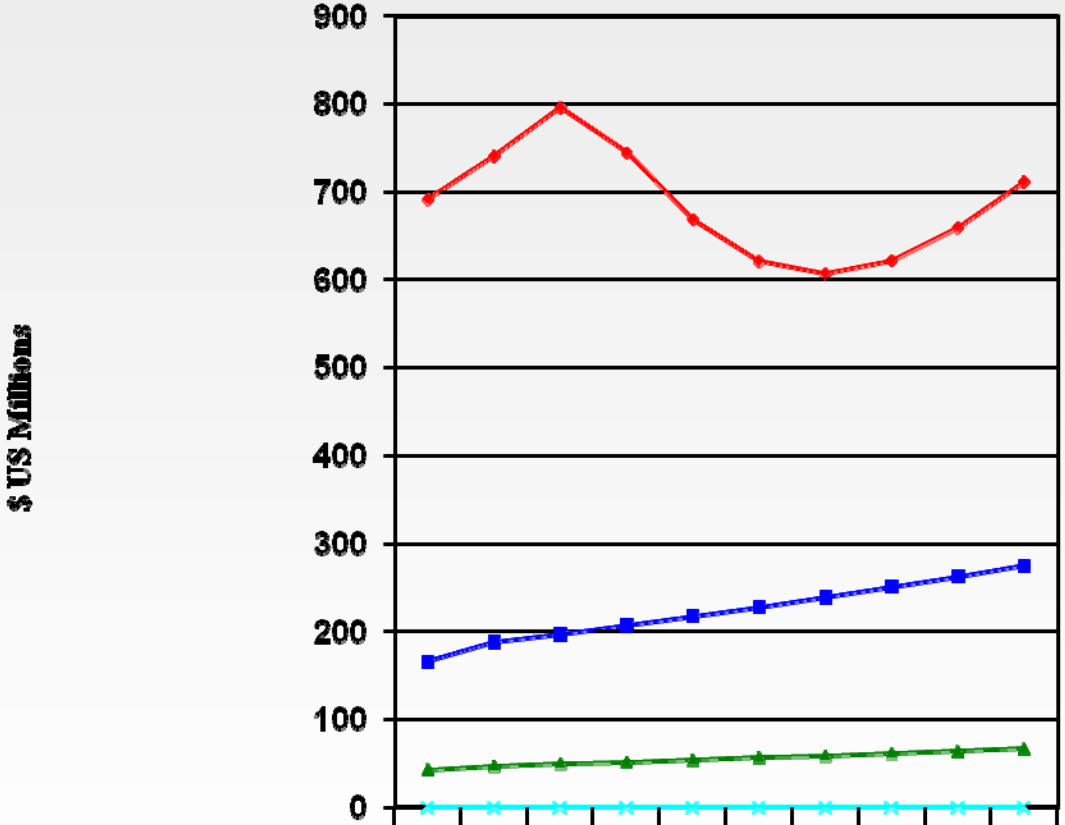
Reduction in Government-Operated Facilities: There Will Be a Need for More Partnerships and Private/Contracted Care



	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Hospitals	149	134	122	116	109	105	97	79	75	75	75	70	70	70	65

Graph adapted from: Chu, David S. "Transforming Military Medicine". Presentation to the National Defense University. July 2007.

Estimated VA Spending of OIF and OEF Veterans 2008-2017, Low Option

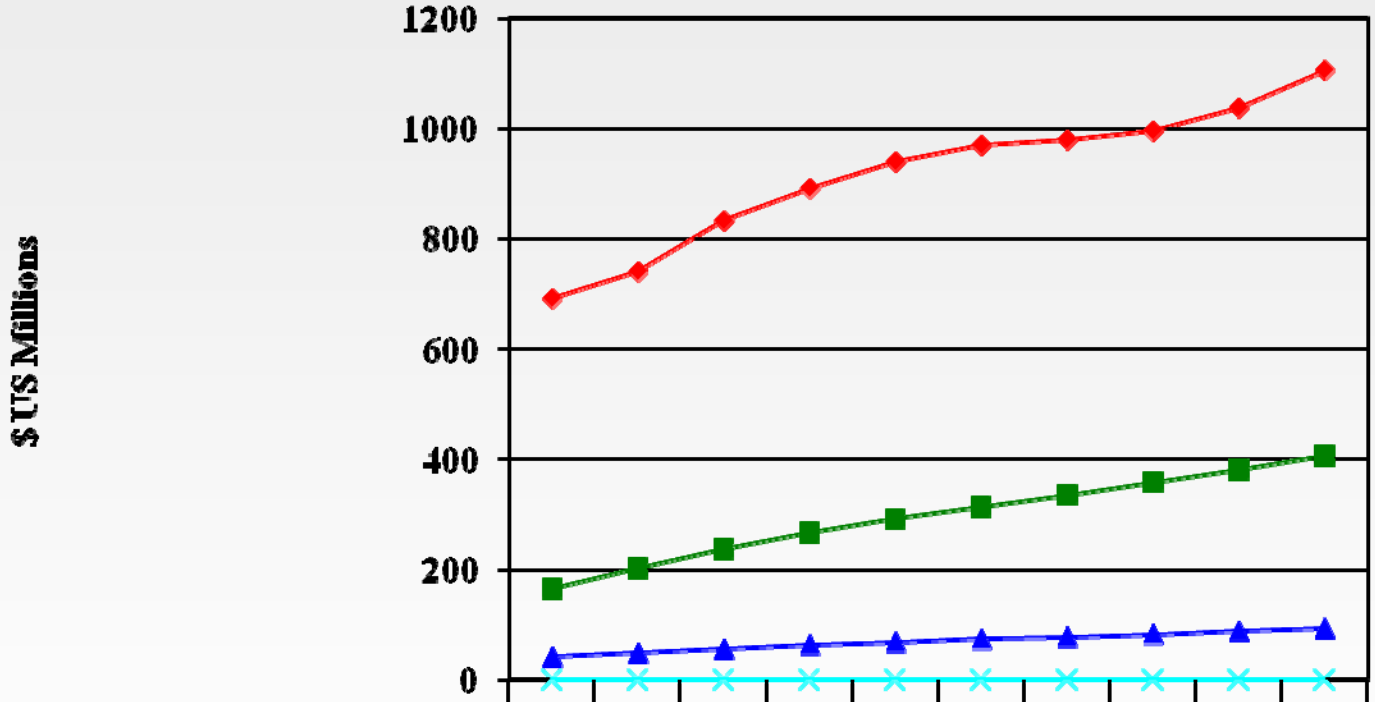


	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Medical Care	692	741	796	745	669	621	607	622	660	712
Disability Compensation	166	188	197	207	218	228	239	251	263	275
Dependency and Indemnity Compensation	43	47	50	52	54	57	59	62	64	67
Total	0	0	0	0	0	0	0	0	0	0

- As of December 2006, of 1 million active duty and 400,000 reservists deployed to Iraq and Afghanistan, 690,000 have become eligible for VA healthcare.
- Of 229,00 OIF/OEF patients seen by the VA, 3 percent have been hospitalized in VA facilities at least once since 2002. The rest were on a outpatient basis only. VA estimates an average annual cost of $ 2,610 per OIF/OEF veteran who used VA health care in 2006, and an overall average of $ 5,765 per year for all VA patients
- VA medical costs associated with the wars could total between $7 billion and $ 9 billion over the 10-year period until 2017. disability compensation and survivors' benefits could add another $3 billion to $4 billion over the same period.

Source: CBO Testimony, Statement of Mathew S. Goldberg, Deputy Assistant Director for National Security. Projecting the Costs to Care for Veterans of U.S. Military Operations in Iraq and Afghanistan. 17 October 2007, pg. 17.

Estimated VA Spending of OIF and OEF Veterans 2008-2017, High Option



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Medical Care	692	741	833	892	940	970	980	996	1,038	1,106
Disability Compensation	166	202	237	267	292	314	336	359	382	407
Dependency and Indemnity Compensation	43	50	57	64	69	74	78	83	88	93
Total	0	0	0	0	0	0	0	0	0	0

Source: CBO Testimony, Statement of Mathew S. Goldberg, Deputy Assistant Director for National Security. Projecting the Costs to Care for Veterans of U.S. Military Operations in Iraq and Afghanistan. 17 October 2007, p. 17.