Analysis of the FY 2003 Defense Budget Request

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by

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EXECUTIVE SUMMARY

In its February budget submission, the Bush Administration requested that $396.8 billion be provided for national defense in fiscal year (FY) 2003. This includes about $378.6 billion for the Department of Defense (DoD) and $18.2 billion for Department of Energy and other defense-related programs. The request is about $46.1 billion, or 10.7 percent in real (inflation-adjusted) terms, higher than the level provided for FY 2002. This would make it the largest single-year increase since FY 1982, when the Reagan Administration increased funding for defense by 10.9 percent.

The proposed budget would be about 11 percent higher than the average Cold War budget, and only some 16 percent below the level reached in FY 1985, at the height of the Reagan buildup. Under the administration's new plan, funding for defense would increase by a total of 19.2 percent between FY 2002 and FY 2007. Thus, by FY 2007 the defense budget would be about 20 percent above average Cold War levels and 10 percent below the level for FY 1985.

The FY 2002 defense budget request the Bush Administration submitted last year was largely a place-holder budget intended to tide DoD over pending the administration's completion of a series of major defense reviews. The FY 2003 budget request was to be the first to fully reflect the results of those reviews, including the administration's widely anticipated plans for transforming the US military. The new plan does include a few significant changes from the last Clinton defense plan, especially in the area of national missile defense. However, in terms of force structure and most major modernization programs, the new defense plan is remarkably close to its predecessor. The main difference is that the Bush Administration's proposal may come closer to providing the level of funding that would actually be needed to execute these plans.

HOW MUCH IS ENOUGH?

Whether the requested increase in defense spending is necessary to adequately meet US security requirements is unclear. Fully implementing the administration's defense plan, which would involve maintaining today's force structure and a modernization plan focused on a wide variety of costly next-generation weapon systems, would likely require spending even more on defense than proposed by the administration. Moreover, this plan may fall short of meeting US security requirements if the kinds of challenges faced by the US military change significantly over the coming years. On the other hand, it might be possible to meet US security requirements at lower budget levels by adopting a slightly smaller military and a modernization plan focused more on transformation-oriented weapon systems. In other words, the ability of the US military to meet future challenges effectively is likely to have more to do with how wisely we spend our defense dollars, than on how much we spend.

HIGHLIGHTS OF THE ADMINISTRATION'S BUDGET PROPOSAL

- During the 2000 presidential campaign, then-candidate Bush argued that the US military must be transformed to effectively counter the very different kinds of challenges projected to

emerge over the next several decades. He also suggested that transforming the US military would require reducing investments in some other more traditional types of forces and programs. The administration's plan does include a number of initiatives to expand existing transformation-related efforts, such as the proposal to convert four Trident ballistic missile submarines to carry conventional Tomahawk cruise missiles. But the funding provided for these efforts is relatively small compared to the levels provided for more traditional programs, some of which appear ill-suited to the emerging threat environment. Moreover, notwithstanding earlier statements about the need to divest in some areas, the new plan would not cancel of any major weapons programs.

- The administration's request includes $37.7 billion for homeland security. This represents an increase of about $8.4 billion from FY 2002, or roughly 26 percent in real terms. The largest shares are allocated to DoD (22 percent) and the Departments of Transportation (20 percent) and Justice (19 percent). In addition to this funding, the administration's request provides some $19 billion primarily for fighting the war on terrorism abroad. This includes about $9 billion for various programs and activities specified in the request, and $10 billion in a reserve fund to be used, if and when the president deems necessary, to cover the operational costs of prosecuting the war on terrorism in FY 2003. The administration has also indicated that it will submit a request for a supplemental appropriation to cover additional costs related to the war on terrorism that have already been, or are expected to be, incurred in FY 2002.

- The FY 2003 budget request would provide some $150.2 billion for operations and maintenance (O&M) activities, $22.7 billion more than was provided for FY 2002. Some $20.1 billion of this request is for the Defense Emergency Response Fund (DERF). This includes $10 billion to cover the cost of future military operations and $10.1 billion for a broad range of programs generally related to the war on terrorism, but not necessarily to O&M activities. However, even excluding funding in the DERF, the proposed O&M budget should be adequate to keep US forces at high states of readiness in FY 2003. It is less clear whether the O&M funding levels projected for the latter years of the defense plan, especially FY 2006 and FY 2007, will prove adequate.

- The administration's request would provide a 4.1 percent across-the-board increase in military pay and additional amounts of up to 2 percent for some mid-career military personnel. The request would also move DoD closer to the goal of eliminating out-of-pocket expenses for off-base housing. These measures build upon and expand the pay-related initiatives begun under the previous administration and Congress. If problems with recruitment and retention persist, larger across-the-board raises may be needed in the future. In general, however, targeted pay raises and bonuses are likely to prove the most cost-effective approaches.

- The FY 2003 defense budget request includes a $5.4 billion increase in funding for research and development (R&D). This increase, coming on top of a $6.8 billion increase provided in FY 2002, would bring the DoD R&D budget to $53.9 billion. This is 25 percent more in real terms than was provided in FY 2001 and some 75 percent above the Cold War average. Robust funding for R&D is probably appropriate, given the need to transform the US military, the speed with which technology is advancing, and the likelihood that the future

challenges facing the US military will be significantly greater than and different from those it faces today. But whether increases of this magnitude are needed is unclear. It is also unclear whether the request is consistent with a sound transformation strategy. For example, while it would provide a 54 percent increase for Missile Defense Agency R&D, compared to FY 2001, it would provide only 5 percent more for Science and Technology (S&T) programs—and strong S&T efforts are likely to be critical for transformation.

- The request provides $72.1 billion for weapons procurement. This consists of $68.7 billion included in DoD's procurement accounts and $3.2 billion to be funded through the DERF. The request represents a real increase from this year's level of about 16 percent. Moreover, under the administration's plan, funding for procurement is projected to increase to some $91.8 billion (FY 2003 dollars) by FY 2007. It is widely agreed that funding for procurement needs to be increased. But, as in the case of R&D funding, just how much procurement funding needs to be increased is unclear. Fully implementing the administration's new plan would probably require increasing procurement funding to $80-95 billion a year. On the other hand, an approach that included the purchase of some next-generation weapon systems, but focused relatively more on the production of new current-generation systems, and upgrades of existing systems—perhaps similar to the "skip-a-generation" approach that was apparently considered, but ultimately rejected, by the Bush Administration—might cost some $70-80 billion a year.

- There currently appears to be broad support among the American public and policymakers for increasing spending on defense. However, the extent to which the large increases projected under the current plan are sustainable is unclear. The federal budget picture has deteriorated significantly over the past year. In January 2001, the Congressional Budget Office (CBO) estimated that the federal government would accrue surpluses totaling some $5.6 trillion over the 2002-11 period. By contrast, CBO's March 2002 estimate projects total surpluses of only about $1.7 trillion over these years. The largest factor causing this precipitous drop in the surplus is the tax cut enacted last year, followed by the economic slow down, spending increases, and technical changes. If fully implemented, the planned increase in defense spending would reduce the size of the projected surplus by at least another $400 billion. Other priorities with which DoD might have to compete include further tax cuts, reducing the federal debt, ensuring the health of Social Security and Medicare, and providing greater resources for education and other domestic programs. Combined with the proposed increase for defense, the total cost of these initiatives could easily exceed $2.1 trillion—more than consuming the projected surplus through 2011.

I. INTRODUCTION

In its February budget submission, the Bush Administration requested that $396.8 billion be provided for national defense in fiscal year (FY) 2003. This includes about $378.6 billion for the Department of Defense (DoD)[1] and $18.2 billion for Department of Energy (DoE) and other defense-related programs. The request is about $46.1 billion, or 10.7 percent in real (inflation-adjusted) terms,[2] higher than the level provided for FY 2002. This would make it the largest single-year increase since FY 1982, when the Reagan Administration increased funding for defense by 10.9 percent.

The proposed budget would be about 11 percent higher than the average Cold War budget, and only some 16 percent below the level reached in FY 1985, at the height of the Reagan buildup. Under the administration's new plan, funding for defense would increase by a total of 19.2 percent between FY 2002 and FY 2007. Thus, by FY 2007 the defense budget would be about 20 percent above average Cold War levels and 10 percent below the level for FY 1985.

The FY 2002 defense budget request the Bush Administration submitted last year was largely a place-holder budget intended to tide DoD over pending the administration's completion of a series of major defense reviews. The FY 2003 budget request was to be the first to fully reflect the results of those reviews, including the administration's widely anticipated plans for transforming the US military. The new plan does include a few significant changes from the last Clinton defense plan, especially in the area of national missile defense. However, in terms of force structure and most major modernization programs, the new defense plan is remarkably close to its predecessor. The main difference is that the Bush Administration's proposal may come closer to providing the level of funding that would actually be needed to execute these plans.

HOW MUCH IS ENOUGH?

Whether the requested increase in defense spending is necessary to adequately meet US security requirements is unclear. Fully implementing the administration's defense plan, which would involve maintaining today's force structure and a modernization plan focused on a wide variety of costly next-generation weapon systems, would likely require spending even somewhat more on defense than proposed by the administration. Moreover, this plan may fall short of meeting US security requirements if the kinds of challenges faced by the US military change significantly over the coming years. On the other hand, it might be possible to meet US security requirements at lower budget levels by adopting a slightly smaller military and a modernization plan focused more on transformation-oriented weapon systems. In other words, the ability of the US military

[1] The DoD request includes $10 billion in a contingency fund to be used, if and when necessary, to cover the costs of future operations in the war on terrorism.

[2] All changes in funding levels cited in this analysis are expressed in real terms. The increase for DoD (vice national defense) would be about $48 billion, or 11.2 percent.

to meet future challenges effectively is likely to have more to do with how wisely we spend our defense dollars, than on how much we spend.

ORGANIZATION OF REPORT

This analysis of the FY 2003 defense budget request is broken down into three main sections. The introduction provides an overview of three important issues: the extent to which the administration's request appears to be consistent with a sound transformation strategy, the funding levels proposed for homeland security and the war on terrorism, and the sustainability of the administration's proposed increase in funding for defense in the face of other budget priorities. The second part of this report (Chapter II) discusses how the administration's FY 2003 would affect each of the major areas of the defense budget, including the operations and maintenance (O&M), military personnel, research and development (R&D), and procurement portions of the budget. Lastly, the appendix to this report contains tables and graphs which chart past and projected future funding levels for the overall defense budget, various categories of defense spending and selected weapons programs.

Transformation

During the 2000 presidential campaign, then-candidate Bush argued that the US military must be transformed to counter effectively the very different kinds of challenges projected to emerge over the next several decades as a result of the ongoing "Revolution in Military Affairs" (RMA). He also suggested that transforming the US military would require not only investing in new kinds of capabilities, but also reducing investments in some other more traditional types of forces and weapons programs. More recently, in the 2001 Quadrennial Defense Review (QDR), the administration stated that continuing a "business as usual approach" in DoD was not a viable option, and cautioned that "without change the current defense program will only become more expensive to maintain over time and will forfeit many of the opportunities available to the United States today."[3]

Notwithstanding these statements, with few exceptions, the administration's new defense plan appears very similar to the defense plan it inherited. For example, the plan would maintain the same number of Army divisions, Air Force fighter wings and Navy aircraft carriers as called for in the last Clinton plan. And, like the previous plan, the new defense plan, with few exceptions, is focused on the acquisition of traditional kinds of weapons programs, such as tactical fighters, aircraft carriers and heavy artillery systems.

The administration's defense plan includes a number of initiatives to add to or expand existing transformation-related efforts. Some of these initiatives, such as the conversion of four Trident ballistic missile submarines to carry conventional Tomahawk cruise missiles, represent significant changes. But the funding levels provided for these efforts are relatively small compared to the levels provided for some other programs which appear ill-suited to the emerging threat environment.

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[3] *Quadrennial Defense Review Report*, (Washington, DC: DoD, September 30, 2001), p. 16.

Perhaps most questionable is the administration's decision to continue to move ahead with three new tactical fighter programs, whose total costs could exceed $300 billion over the next several decades. This focus on relatively short-range tactical fighters seems at odds with recent experience in Afghanistan and elsewhere which suggests that, in the future, the US military may often have to operate in wartime without access to forward bases. It also seems inconsistent with the 2001 QDR, which noted that the problem of how to "project and sustain US forces in distant anti-access or area-denial environments" was one of the key transformational challenges facing the US military.[4] Likewise, the Crusader artillery system seems out of step with the goal of having an Army that is light enough to rapidly deploy to regions where the United States does not have easy access to ports and other facilities.

Homeland Security and the War on Terrorism

The Bush Administration's FY 2003 budget request includes $37.7 billion for homeland security. This represents an increase of about $8.4 billion from FY 2002 (or $18.2 billion if FY 2002 emergency funding is excluded), or roughly 26 percent in real terms. The administration defines homeland security to include "those activities that are focused on combating terrorism and protecting against terrorism and occur within the United States and its territories."[5] This funding is split among many different departments and agencies. The largest shares are allocated to the Departments of Defense (22 percent), Transportation (20 percent) and Justice (19 percent). (See Table 1.)

Table 1: FY 2003 Request for Homeland Security by Agency (in billions of dollars)

Agency	Funding	Share
DoD	8.3	22%
Transportation	7.5	20%
Justice	7.2	19%
HHS	4.5	12%
FEMA	3.4	9%
Treasury	3.0	8%
Energy	1.1	3%
State/International	0.8	2%
Agriculture	0.4	1%
Other	1.5	4%
Total	**37.7**	**100%**

Source: OMB.

[4] Ibid., p. 43.

[5] *Fiscal Year 2003 Budget of the United States* (Washington. DC: US Government Printing Office (GPO), 2002), p. 23.

In addition to this funding, the administration's FY 2003 request provides some $19 billion primarily for fighting the war on terrorism abroad. This includes some $9 billion for various programs and activities specified in the administration's request, and $10 billion in a reserve fund to be used, if and when the president deems necessary, to cover the operational costs of prosecuting the war on terrorism in FY 2003 (e.g., due to the continuation of the war in Afghanistan, or new operations elsewhere). The administration has also indicated that it will submit a request for a supplemental appropriation to cover additional costs related to the war on terrorism that have already been, or are expected to be, incurred in FY 2002.[6]

Table 2: FY 2003 Request for Homeland Defense By Initiative Area (in millions of dollars)

Initiative Area	FY 2002 *Enacted	FY 2002 **Supplemental	FY 2002 Total	FY 2003 Request	***Change
Supporting First Responders	291.0	651.0	942.0	3,500.0	2,558.0
Defending Against Biological Attacks	1,408.0	3,730.0	5,138.0	5,898.0	760.0
Securing America's Borders	8,752.0	1,194.0	9,946.0	10,615.0	669.0
Sharing Information & High Technolog	155.0	75.0	230.0	722.0	492.0
Aviation Security	1,543.0	1,035.0	2,578.0	4,800.0	2,222.0
Other Non-DoD Homeland Security	3,186.0	2,384.0	5,570.0	5,352.0	(218.0)
DoD Homeland Security (Other)	4,201.0	689.0	4,890.0	6,815.0	1,925.0
Total	**19,536.0**	**9,758.0**	**29,294.0**	**37,702.0**	**8,408.0**

* Funding provided for FY 2002 in the regular annual appropriations bills.
** Funding provided for FY 2002 in the emergency supplemental appropriation enacted after September 11, 2001 attacks
*** The FY 2003 request compared to total FY 2002 funding.

Source: OMB.

Furthermore, the administration has proposed at least $5 billion in other funding related to the war on terrorism. This includes $3.5 billion for economic assistance, military equipment and training for "front line" states, $121 million for anti-terrorism assistance to other states, $4 million to provide technical assistance to foreign governments finance ministries to help cut off terrorist funding, and $1.5 billion for efforts aimed at preventing the spread of weapons of mass destruction (WMD) or WMD knowledge from Russia and other states of the former Soviet Union.[7]

[6] The emergency supplemental appropriation enacted after the September 11, 2001 terrorist attacks included funding to cover the costs of the war for the first three months.

[7] For a fuller discussion of the administration's budget request for homeland security and the war on terrorism, see Steven M. Kosiak, "FY 2003 Budget Request for Homeland Security and Combating Terrorism," CSBA Update, February 8, 2002.

Setting the Topline for Defense

There currently appears to be broad support among the American public and policymakers for increasing defense spending. However, the extent to which the large increases projected under the current plan for defense are sustainable over the long term is unclear. In the aftermath of the terrorist attacks of September 11, 2001, defense spending has become a higher priority for most Americans, especially as it relates to homeland defense and the war on terrorism, but it is still far from the only priority. Over the long term, the defense mission has to compete with other priorities of the American public and political leadership. These goals include holding down or further cutting taxes, reducing the federal debt, ensuring the health and durability of Social Security and Medicare, and providing greater resources for education, health research and other domestic programs.

In terms of budget surplus projections, the federal budget picture has deteriorated significantly over the past year. In January 2001, the Congressional Budget Office (CBO) estimated that—assuming no tax cuts or entitlement expansions were enacted, and spending on discretionary programs (which include defense and a broad range of non-defense programs, such as education, transportation and health research) was increased just enough to cover inflation—the federal government would accrue surpluses totaling some $5.6 trillion over the 2002-11 period. By contrast, CBO's March 2002 estimate projects total surpluses of only about $1.7 trillion over these same years.[8]

The largest single factor causing this precipitous drop in surplus projections is the tax cut enacted last year. The ten-year cost of the tax cut is about $1.7 trillion, including about $1.3 billion in direct costs and about $400 billion for higher interest payments.[9] The recent economic slow down accounts for about $900 billion of the decline. Increases in spending, largely related to defense and homeland security, account for about $700 billion of the reduction. The remaining $600 billion drop in projected surplus levels was caused by various "technical" changes in CBO's methodology.[10]

If fully implemented, the planned increase in funding for defense included in the administration's February budget submission would reduce the size of the projected surplus by at least another $400 billion over the coming decade.[11] Other priorities with which DoD might have to compete to achieve and sustain this increase include the following:

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[8] Dan L. Crippen, Director of CBO, Statement Before the Senate Budget Committee, "An Analysis of the President's Budgetary Proposals for 2003," March 6, 2002, p. 2.

[9] Tax cuts and spending increases both result in higher interest payments because enacting either measure causes the federal debt to be paid off more slowly than would otherwise be the case. The estimated cost each of the various policy and technical changes discussed in this section include their associated interest costs.

[10] See Dan L. Crippen, Director of CBO, Statement Before the Senate Budget Committee, "The Budget and Economic Outlook: Fiscal Years 2003-13," p. 2; Crippen, "An Analysis of the President's Budgetary Proposals for 2003," pp. 11-12; Richard Kogan, Robert Greenstein and Joel Friedman, "The New CBO Projections: What Do They Tell Us?," Center on Budget and Policy Priorities (CBPP), January 29, 2002, p. 2.

[11] This estimate assumes that funding for defense would be increased as proposed by the administration through FY 2007 and would grow only at the rate of inflation over the FY 2008-11 period.

- **Non-Defense Discretionary Spending:** The CBO estimate assumes that overall spending on non-defense discretionary programs will remain essentially flat in real terms over the next decade. History suggests that such a course is extremely unlikely. If overall spending on discretionary domestic programs were instead to grow at the same rate it has over the past decade and a half, about 2 percent above the rate of inflation, some $400 billion more would be needed over the next decade.

- **Further tax cuts:** The tax bill passed last year included several artificial sunset provisions. Among other things, many of the tax cut provisions are set to expire in 2010, eight years from now. President Bush has proposed making those cuts permanent. Doing so would increase costs by about $300 billion through FY 2011.[12] Moreover, proposed changes in the Alternative Minimum Tax (AMT), for which there is broad bipartisan support, would reduce surplus projections by another $200 billion or more.

- **Prescription Drug Benefit:** There is broad bipartisan support in Congress for a prescription drug benefit for Medicare beneficiaries. Cost estimates vary greatly, but at least $300 billion would likely be required over the next decade to implement such a program.

- **Fixing Social Security:** Absent any policy changes or additional funding, the Social Security trust fund is projected to eventually become insolvent. Opinions differ greatly on how to fix Social Security, but setting aside at least $500 billion over the next decade might be prudent given the magnitude of the problem, which is only projected to get worse as the baby boomer generation begins retiring around 2010.

Altogether the cost of the administration's proposed increase in funding for defense plus the other policy priorities discussed above could easily add some $2.1 trillion to the federal government's costs over the next decade—more than consuming the projected $1.7 trillion surplus. This does not of course mean that the administration's proposed funding increases for defense are not sustainable. These figures do, however, suggest that sustaining those increases will require making difficult choices between defense and other important priorities over the coming decade.

[12] Joel Friedman and Robert Greenstein, "The Administration's Proposal to Make the Tax Cut Permanent," CBPP, February 4, 2002, p. 3.

II. THE ADMINISTRATION'S BUDGET REQUEST

The following section provides a brief analysis of how major funding categories and programs fare under the administration's FY 2003 budget request.

OPERATIONS AND MAINTENANCE

The O&M budget covers the costs of purchasing fuel, spare parts and many other items associated with carrying out training activities, as well as operations in Afghanistan, Bosnia, Kosovo, Iraq, and elsewhere. As such, the readiness of the US military to fight effectively on short notice is largely dependent on the provision of adequate funding in this account. In addition, the O&M budget covers the costs of many programs less immediately related to near-term readiness, such as military health care, base operations and other support or "infrastructure" activities. These costs include the salaries of most civilian DoD personnel, who perform many of DoD's infrastructure functions. The FY 2003 budget request would provide some $150.2 billion for O&M, about $22.7 billion more than was provided for FY 2002.[13]

This figure somewhat overstates the level of resources that would actually be provided for O&M activities in FY 2003 under the administration's request. Some $20.1 billion of this request is for the Defense Emergency Response Fund (DERF). The DERF includes $10 billion that would be made available to cover costs incurred in carrying out military operations in FY 2003 in Afghanistan or elsewhere related to the war on terrorism, should the US remain involved in such operations. The other $10.1 billion in the DERF is for a broad range of specific programs and activities generally related to the war on terrorism. Part of this funding would be used to fund O&M activities. For example, the administration has proposed using about $1.2 billion in DERF funding to cover the cost of continuing to fly combat air patrol missions over US cities. But some DERF funding would be used for other non-O&M programs and activities. For instance, the request would use $3.2 billion in DERF funding to procure additional precision-guided munitions (PGMs), aircraft and other equipment believed to be critical to conducting future military operations.

But even excluding that portion of the DERF account that would not be used to cover O&M costs, the FY 2003 request for O&M is quite high by historical standards and should be adequate to keep US forces at high states of readiness.[14] This is especially true because the FY 2003 request comes on top of a relatively large increase provided in FY 2002.

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[13] The FY 2002 figure used for this comparison does not include any funding provided in the FY 2002 defense supplemental appropriation the administration has announced it will request sometime this Spring.

[14] Another $3.3 billion of the increase in O&M funding included in the administration's FY 2003 request is due to its proposal to shift to accrual accounting to cover the full retirement costs of civilian DoD employees. Currently, some costs related to pensions and health insurance provided to civilian DoD employees (as well as other civilian federal employees) upon retirement are paid by the Treasury on a pay-as-you go basis. On the other hand, as discussed later in the military personnel section of this report, beginning in FY 2003 the cost of providing health care to current military retirees over 65 (about $4 billion in FY 2002 and an estimated $5.6 billion in FY 2004), will be paid for by the Treasury rather than taken out of DoD's O&M budget.

The FY 2003 O&M request works out to about $94,000 per active duty troop, even excluding the funding provided in the DERF. This is roughly 60 percent more in real terms than DoD provided per troop in FY 1990, the year the United States began sending forces to the Persian Gulf in preparation for Operation Desert Storm. One of the most troubling questions for DoD is why, notwithstanding this substantial increase in O&M funding, the readiness of the US military—at least as measured by some indicators—has actually declined somewhat over the past decade. For example, Air Force aircraft mission-capable rates have fallen about 10 percent since the early 1990s and Navy Air crews have fallen short of their flying hour goals in recent years.

On one level the answer to this question appears to be relatively simple. Virtually all the growth in O&M funding that has occurred over the past decade has been for infrastructure-related programs and activities, which today account for some 60 percent of DoD's O&M budget. On a per troop basis, readiness-related O&M spending is probably no higher, and may be somewhat lower, today than it was in FY 1990.[15] At the same time, unit for unit, the cost of keeping US forces at high states of readiness has actually increased, at least modestly, over the past decade. Among other things, this is due to the increasing age of some military equipment and the greater intensity with which some forces are now operated.

On another level, however, this answer is unsatisfying. It begs the question of why infrastructure-related O&M costs have increased so dramatically over the past decade. If readiness-related O&M spending has indeed declined roughly in proportion to cuts in the size of the military since FY 1990, by implication, infrastructure-related O&M costs must have increased by well over 50 percent during this period. Some observers have pointed to cost growth in a variety of non-traditional activities (sometimes referred to as "non-defense" defense programs) funded through the O&M budget, such as environmental cleanup and weapons dismantlement aid to the states of the former Soviet Union, to explain this increase. But growth in such non-traditional areas has been relatively modest, especially over the past five years.

The great bulk of the cost growth that has occurred in infrastructure-related O&M activities has clearly involved more traditional functions. Some sources of this cost growth are easy to identify, such as military health care and pay for civilian DoD personnel. But the source of much of this growth is unclear. In addition to military health care, the O&M budget covers the costs of a wide variety of other infrastructure-related functions, such as base operations, headquarters and administration, central (i.e., non-unit) training, and logistical activities. Although, due to data limitations, the trends in any one of these particular activities is difficult to ascertain, taken as a whole, spending on these infrastructure-related functions appears to have increased substantially over the past decade.

Given the difficulty of determining the cause of past cost growth in DoD's O&M budget, it is difficult to project future funding requirements with much confidence. Overall, however, it is

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[15] See, Amy Belasco, *Paying for Military Readiness and Upkeep: Trends in Operations and Maintenance Spending* (Washington, DC: CBO, September 1997) and Spartacus (the pseudonym of the author, who works for a congressional committee), "Will the Bush/Rumsfeld Pentagon Endorse Existing Plans to Worsen Military Readiness?" June 2001.

probably safe to assume that costs will continue to increase. Among the areas most likely to experience significant cost growth are the following:

- **Military Health Care.** Adjusted for changes in the size of the force, military health care costs grew substantially in the 1990s. This was due partly to increases in the cost of providing medical services, and partly to the fact that the overall beneficiary population (which includes military retirees and dependents, as well as active duty troops) declined much more modestly than did the size of the force structure. The FY 2003 request would provide some $26 billion for military health care, including $14.4 billion for activities funded through the O&M budget. Health care costs for the civilian population are projected to grow well above the rate of inflation over the next decade, and there is little reason to believe that the military's health care costs will grow any more slowly.

- **Equipment Maintenance and Repair.** Through most of the 1990s, the age of the Services' weapons inventory increased only modestly, despite the fact that relatively few weapons were purchased during the decade. This is because the Services bought large quantities of new weapon systems in the 1980s, and then in the 1990s cut the size of the force structure by about one-third, with the oldest equipment generally being retired first. However, the buildup of the 1980s is now receding further into the past, and most of the planned force structure cuts were completed by the mid-1990s. As a result, the average age of most major weapon systems is projected to increase substantially over the next decade. To date, the aging of the Services' weapons inventory does not seem to have resulted in a substantial increase in operations and maintenance costs.[16] However, as the aging of the force accelerates over the coming decade, age-related O&M costs could grow significantly, perhaps by as much as $5 billion by 2010.[17]

- **Facilities Maintenance and Repair.** It is widely believed that DoD has spent too little over the past decade or more on maintaining, repairing and constructing military bases, housing and other facilities. According to the administration, recent levels of funding would allow DoD, on average, to replace facilities only once every 192 years. DoD would like to reduce the replacement rate down to about 67 years, more in line with commercial standards. The administration has proposed to defer this effort until after 2005, when a new round of base closures is scheduled to begin. It argues that substantially increasing funding for military construction prior to 2005 does not make sense because it might lead to spending money on many bases that could be closed a short time later. In the meantime, under the administration's plan, DoD would focus its efforts on critical repairs. This approach may make sense and, in any case, be unavoidable, given Congress' unwillingness to authorize a new base closure round sooner. But deferring needed repairs and construction so long may increase the total amount that ultimately needs to be paid for these efforts. Although it is

[16] Gregory T. Kiley, *The Effects of Equipment Aging on the Costs of Operating and Maintaining Military Equipment* (Washington, DC: CBO, August 2001).

[17] Steven M. Kosiak, "Three Myths About DoD's Weapons Modernization Requirements," CSBA Backgrounder, June 18, 2001, p. 5.

unclear precisely how much funding for facilities upkeep and construction will need to be increased in future years, some significant increase will almost certainly prove necessary.[18]

If DoD were able manage its infrastructure-related functions more effectively, it might be possible to reduce the rate of O&M cost growth in the future. As noted earlier, this has been an area of substantial and, to a large extent, unexplained cost growth over the past decade. Proposals aimed at reducing infrastructure-related O&M costs include making greater use of "competitive sourcing" (allowing private sector contractors to compete for maintenance, repair and other work currently performed at public sector facilities) and closing excess military bases. The administration and others claim that as much as 25 percent of the existing basing structure is excess of requirements and that closing those unneeded facilities could ultimately yield savings of some $3.5 billion a year. Likewise, according to a 1996 study by a panel of DoD's Defense Science Board (DSB), through competitive sourcing and other initiatives, DoD might eventually be able to achieve annual recurring savings of as much as $30 billion. If history is any guide, however, the actual level of savings is likely to be much more modest.[19] As such, while these initiatives should be vigorously pursued, the best that is likely to be achieved is some slowing of the rate of cost growth in O&M, rather than actual reductions in funding requirements.

If O&M costs do continue to grow, and the overall DoD budget is not increased in a substantial and sustained way, it will probably prove impossible to significantly boost procurement funding. During the Clinton Administration, O&M cost growth was a key factor in delaying projected increases in the procurement accounts. For much of that period, the Clinton Administration submitted budgets which projected significant increases in procurement two or more years down the road. But each year, O&M costs proved to be higher than anticipated, forcing the administration to add funding to the O&M accounts and push back the projected upturn in procurement funding.

Compared to previous plans, the current defense plan appears to make more realistic assumptions about O&M costs over the next several years. Most past plans have assumed that O&M funding would need to be increased in the coming year, but that O&M costs would stay relatively flat, or even decline in real terms, in the following years. Given the budget pressures discussed above, and the fact that, historically, O&M costs per troop have consistently and persistently increased at an average annual rate of 2-3 percent in real terms, this assumption was probably unrealistic. By contrast, the current plan projects increases in O&M funding not only in FY 2003, but through FY 2005.

On the other hand, the administration's plan does not assume further cost growth in the last two years of the plan, FY 2006 and FY 2007. Instead, it assumes that O&M costs will stay essentially flat at their projected FY 2005 level over these years. This calls into question the realism of the administration's projection that procurement funding will be increased over those last two years.

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[18] Funding for maintaining and repairing military facilities is found in the O&M budget, as well as the Military Construction and Family Housing budgets, while construction funding is provided through the latter two accounts.

[19] For a discussion of problems and prospects for efficiency savings within DoD, see Robert F. Hale, *Promoting Efficiency in the Department of Defense: Keep Trying, But Be Realistic* (Washington, DC: CSBA, January 2002).

This may be especially troubling because, under the administration's plan, more than half of the planned increase in procurement funding projected for the next five years would occur in FY 2006 and FY 2007. The only way to avoid funding migration out of procurement and into O&M in those years might be to increase the overall DoD budget by even more than currently projected, or make offsetting cuts in other parts of the defense budget, such as R&D funding or force structure.

MILITARY PERSONNEL

Overall, the quality of personnel in the US military—a critical element in the near-term readiness of US forces—remains very high. The Services began having some problems with recruiting and retaining quality military personnel several years ago. The Army, Navy and Air Force each failed to meet their recruitment goals once or twice over the FY 1999-2000 period. Likewise, several of the Services failed to meet their overall retention goals in one or more years during the FY 1999-2001 period. And all of the Services have had problems retaining some specialized personnel, such as pilots, computer specialists, aviation mechanics, and electronics technicians. Nevertheless, taken as a whole, the quality of the US military remains very high by historical standards, and the most recent data suggests that the Services may have turned the corner on their recruitment and retention problems.

Through greater use of enlistment bonuses and other incentives, all four Services were able to meet or exceed their recruitment goals in 2000 and 2001. Moreover, throughout the past several years, the Services have been able to keep the quality standards for recruits relatively high. In each year over 90 percent of the recruits have been high school graduates and more than 65 percent scored above average on the Armed Forces Qualification Test (AFQT). Likewise, the Services' retention levels appear to have leveled off or improved in some cases in the past two years.

In an effort to improve military recruitment and retention, the Clinton Administration and Congress agreed to a very costly military pay and retirement package as part of the FY 2000 defense budget. Under the law, future military pay raises were set at half a percentage point above the employment cost index (ECI), a measure of private sector wage growth. The package also provided for higher pay raises for military personnel in certain pay grades, as well as funding for expanded use of re-enlistment bonuses and other incentives to help with recruitment and retention. At the same time, the military retirement system was changed so that military personnel who joined after July 31, 1986, like those who joined in prior years, will now be able to retire at 50 percent (rather than 40 percent) of basic pay after 20 years of service.

The Bush Administration's FY 2002 request built upon and expanded the pay-related initiatives begun under the previous administration and Congress. The FY 2002 budget included an across-the-board pay raise of 4.6 percent (consistent with current law), as well as targeted increases that resulted in overall pay raises ranging from 5 to 10 percent for all military personnel. The administration also continued a plan (begun in 2001) to reduce the out-of-pocket housing expenses paid by military personnel living off base from 15 percent in 2001 to zero by 2005. The administration's FY 2003 request would provide further increases in military pay and other benefits. It includes a 4.1 percent across-the-board increase (0.5 percent above the ECI) and

additional amounts of up to 2 percent for some mid-career personnel. The request would also move DoD closer to the goal of eliminating out-of-pocket expenses for off-base housing.

Given continued concerns about military recruitment and retention, the pay raise and improvements in military housing included in the administration's FY 2003 budget request are probably appropriate. It is less clear whether the higher (ECI plus 0.5 percent) pay raises projected for later years will be necessary. The Joint Chiefs of Staff (JCS) have argued in favor of these large pay raises on grounds that military personnel are paid substantially less than comparable private-sector workers. However, studies by CBO, RAND and others indicate that there is little or no pay gap, and retention has not been an across-the-board problem for the Services.[20] The sounder approach might be to target additional pay raises and bonuses to those categories of personnel which the Services are having the most difficulty retaining.

Overall, under the administration's proposal, funding for military personnel would grow by some $12.2 billion in FY 2003, to $94.2 billion. Some $3-4 billion is needed to cover the proposed increases in pay and housing allowances. The bulk of the increase, however, is related to the cost of the TRICARE for Life program enacted in FY 2001. Under this program, military retirees and their dependents are now allowed to continue to receive medical care through the Services' health care system (TRICARE) even after turning 65 years old. Prior to this legislative change, military retirees were eligible for TRICARE until age 65. After that, they were shifted to Medicare, and entitled to care at military treatment facilities only on a space-available basis. For FY 2002, the program's first year, the cost of providing this benefit totaled about $4 billion, and was paid through the Defense Health Program (DHP) in the O&M budget. However, beginning in FY 2003 the TRICARE for Life program is to be funded on an accrual basis through the Services' military personnel accounts.

This means that each year the Services' will pay a certain amount of money ($8.1 billion in FY 2003) into a trust fund, with funding from this trust fund used to cover the health care costs of future military retirees after they turn 65 and become eligible for TRICARE for Life. In other words, this accrual is intended to cover the future TRICARE for Life costs of personnel currently serving in the military.[21] The TRICARE for Life costs of current military retirees over 65, estimated to be about $5.6 billion in FY 2003, will be paid by the Treasury rather than out of DoD's O&M budget, as they are this year.[22] Thus, the net effect of this shift to accrual accounting will be to increase DoD's overall funding requirements by about $3 billion, with the

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[20] See, for example, Christopher Jehn, Assistant Director, National Security Division, CBO, before the House Armed Services Committee Military Personnel Subcommittee, statement on "Military Pay and Benefits," February 25, 1999.

[21] This is similar to the military retirement accrual which is intended to cover the future pensions of personnel currently serving in the military.

[22] Under the plan, the Treasury would make payments from general revenue into a the Uniformed Services Retirement Health Fund (USRHF). Funds would than be paid out of the USRHF to reimburse the TRICARE program for the cost of providing care to military retirees over 65 years of age. For FY 2003, these costs are estimated to be about $5.6 billion.

$8.1 billion rise in the military personnel budget partially offset by the reduction in O&M funding requirements.[23]

FORCE STRUCTURE

In the 2001 QDR, the Bush Administration decided to maintain essentially the same force structure (e.g., numbers of Army divisions, Navy carrier battle groups and Air Force fighter wings) proposed and adopted by the Clinton Administration (see Table 3). In recent years, and especially over the past year, each of the Services have made a case for expanding their force structure, or at least increasing personnel levels. However, to date the administration has resisted these proposals, and the FY 2003 budget request essentially reaffirms the decision of the QDR to forego any significant expansion in the size of the US military.

Table 3: Force Structure

	1990	2000	**2003**
Army			
Active Divisions	18	10	**10**
Reserve Personnel	736,100	555,826	**555,000**
Navy			
Active Carriers/Training	15 / 1	11 / 1	**12**
Attack Submarines	97	55	**55**
Ships	546	316	**308**
Active Wings/Reserve	13 / 2	10 / 1	**10 / 1**
Air Force			
Active Wings	24	13	**12+**
Reserve Wings	12	7.6	**7+**
Marine Corps			
Active/Reserve Divisions	3 / 1	3 / 1	**3 / 1**

RESEARCH AND DEVELOPMENT

The FY 2003 defense budget request includes a $5.4 billion increase in funding for R&D. This increase, coming on top of a $6.8 billion increase provided in FY 2002, would bring the DoD R&D budget to $53.9 billion. This is $12.1 billion, or 25 percent more in real terms, than was provided in FY 2001. It is also 5 percent above the level provided in FY 1987, the previous peak

[23] Under the administration's plan, the military personnel budget would be given another large increase in FY 2004, with this boost also related to military health care. The administration has proposed that beginning in FY 2004 the cost of providing access to TRICARE for military retirees under 65 also be funded on an accrual basis. This accrual would amount to some $6.5 billion in FY 2004.

for defense R&D, and some 75 percent higher than the Cold War average. Moreover, under the administration's plan, funding for defense R&D would grow to about $58.5 billion (FY 2003 dollars) in FY 2005, before falling back down to $53.7 billion in FY 2007. Robust funding for R&D is probably appropriate, given the need to transform the US military, the rapid pace at which technology is advancing, and the likelihood that the future challenges facing the US military will be significantly greater than and different from those it faces today. But whether increases of this magnitude are needed, or whether the new R&D budget request emphasizes the most important priorities, is unclear.[24]

Consistent with its public pronouncements, the Bush Administration appears to have given top priority to the development of ballistic missile defense (BMD) capabilities. R&D funding for BMD programs was increased by some $2.5 billion in FY 2002, to about $7 billion. The administration's request would keep overall BMD-related R&D funding at roughly the same level in FY 2003. Under the administration's plan, R&D funding for Missile Defense Agency (MDA) programs would be some 54 percent higher in real terms in FY 2003 than it was in FY 2001, when President Bush entered office.

During the 2000 presidential campaign, then-candidate Bush argued that the US military must be transformed to counter effectively the very different kinds of challenges projected to emerge over the next several decades. He also suggested that transforming the US military would require not only investing in new kinds of capabilities, but also reducing investments in some other more traditional types of forces and weapons programs. The new budget does contain additional R&D funding for several programs widely believed to be important for transformation. However, defense R&D funding is still very much focused on traditional kinds of weapons programs. For example, while the FY 2003 request includes $693 million for the development of unmanned aerial vehicles (UAVs), it includes $4.5 billion for continued development of the Services' three fighter programs.[25] No one believes that the US military can or should be transformed overnight, but the magnitude of the tilt in this budget toward traditional systems may be inconsistent with an effective transformation strategy. The allocation of funding among DoD's different R&D budget activities also raises questions about the priority given to transformation in the FY 2003 budget request.

The DoD R&D budget is broken down into six different budget categories primarily reflecting different phases of the R&D process. The S&T budget includes programs in the three earliest phases of R&D.[26] Though it can take a decade or more for S&T efforts to result in the fielding of new weapon systems, the discovery and development of new technologies promising major leaps in military capability are most likely to be made in these early phases of the R&D process. As a result, many advocates of military transformation believe that S&T programs should be

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[24] For a fuller discussion of the administration's R&D funding request, see Steven M. Kosiak, "FY 2003 Defense R&D: How Much Is Enough? How Wisely Are We Investing?" CSBA Backgrounder, February 20, 2002.

[25] This figure includes R&D funding for the Services' three major fighter programs.

[26] S&T programs consist of those funded through the Basic Research, Applied Research and Advanced Technology Development budget activities.

given a high priority. S&T funding would be increased under the administration's new plan. But the level of growth provided is extremely modest compared to the increase provided for R&D overall, or for specific programs, such as BMD and fighter development. Under the new plan, S&T funding would be increased by only some $744 million, or 5 percent, between FY 2001 and FY 2003. The FY 2003 R&D request includes about $9.7 billion for DoD S&T programs.[27]

The biggest increase in the R&D budget is for engineering and manufacturing development (EMD). This is the last phase of R&D prior to production, as well as the most costly phase for most programs. Under the administration's plan, EMD funding would increase more than any other category. Between FY 2001 and FY 2003, EMD funding would grow by about $5.1 billion, or 55 percent. Altogether, EMD programs account for $13.6 billion of the FY 2003 request. The dramatic growth in this category reflects the administration's decision to begin preparing a number of long-planned, next-generation programs for production, such as the F-35 Joint Strike Fighter (JSF), the Comanche helicopter, and the Crusader artillery system. Much of this funding growth is due to the JSF program in particular. The decision to move ahead with this short-range fighter will cause EMD funding associated with fighter modernization programs to increase by $2.7 billion between FY 2001 and FY 2003.[28]

The administration and the Services claim that most of the programs undergoing EMD are transformational systems, or at least consistent with a sound transformation strategy. If so, this boost in EMD funding may be appropriate. But at least some of the weapons programs being pushed into EMD appear ill-suited for the emerging security environment. Perhaps most questionable is the administration's decision to continue to move ahead with all three planned tactical fighter programs. This focus on relatively short-range aircraft seems at odds with recent experience in Operation Enduring Freedom (Afghanistan, 2001-02), Operation Desert Fox (Iraq, 1998) and elsewhere which suggests that, in the future, the US military may often have to operate in wartime without access to forward bases. Arguably, a better approach would be to shift some of the funding allocated to EMD programs to the S&T portion of the budget in order to expand or accelerate work on new kinds of weapons programs. Moreover, the problem is not simply that more money should perhaps be provided for transformational programs, such as UAVs, in the FY 2003 request.

A greater problem may be that the administration's decision to move ahead with so many costly traditional programs today might make it impossible to increase funding for transformational systems several years down the road, when their feasibility and potential is better proven and they are ready to be moved beyond the early stages of R&D. This is because the level of funding absorbed by traditional weapon systems entering EMD today will grow significantly over the next five years or more, as they move further through the EMD process and into production—potentially crowding out promising, emerging transformation programs.

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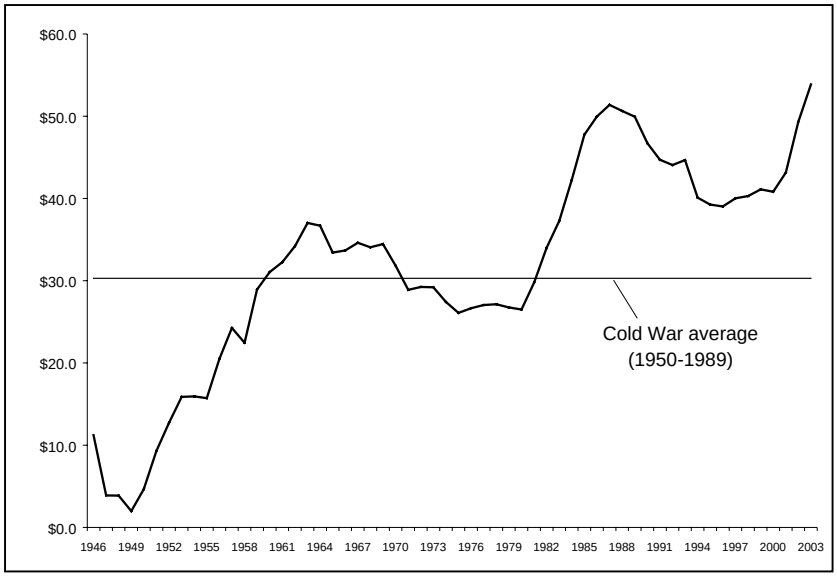
[27] This estimate is based on data from DoD's FY 2003 Research, Development, Test, and Evaluation Programs (R-1) document. In addition, apparently $213 million requested in the DERF, an O&M account, would be allocated to S&T programs.

[28] This reflects changes in EMD funding for the Services' three major fighter programs. It does not include other R&D funding for these programs.

The above discussion focuses primarily on the question of how appropriately R&D funding is allocated among various budget categories in the administration's FY 2003 request. An equally important question is whether the total funding level requested for R&D is appropriate. As noted earlier, robustly funding R&D probably makes sense, given the need to transform the US military, and the likelihood that the future challenges facing the US military will be significantly greater than and different from those it faces today. On the other hand, the level of funding requested by the administration may be higher than necessary to adequately modernize or transform the US military. The requested level of funding for R&D is some 5 percent above the previous peak of FY 1987. But unlike FY 1987, when the United States faced—in the Soviet Union—a peer competitor that spent as much as $50 billion a year on defense R&D, today no potential U.S. adversary spends even close to that amount on defense R&D. This does not necessarily mean that defense R&D funding should be significantly reduced. To the extent that modernizing and transforming the US military represents a cost-effective means of improving US capabilities, especially capabilities to counter new kinds of threats, relatively high levels of spending on R&D may make sense, even if potential adversaries are not modernizing their own forces as rapidly as in the past. But the slower pace at which most potential adversaries appear to be modernizing their forces does at least raise questions about the need for such high levels of funding for defense R&D.

Figure 1: R&D Funding (billions of FY 2003 dollars)



PROCUREMENT

The FY 2003 budget request provides $72.1 billion for weapons procurement. This consists of $68.7 billion included in DoD's procurement accounts and $3.2 billion to be funded through the DERF (an O&M account). The request represents a real increase from this year's level of about 16 percent. Moreover, under the administration's plan, funding for procurement is projected to

increase to some $91.8 billion (FY 2003 dollars) by FY 2007. It is widely agreed that funding for procurement needs to be increased. But, as in the case of R&D funding, just how much procurement funding needs to be increased is unclear.

During the 2000 presidential campaign, then-candidate Bush suggested that it might make sense for the US military to "skip a generation" of planned new weapon systems, and focus resources on developing and later producing new kinds of weapon systems that would be better suited to fighting the new and different kinds of threats likely to emerge in the future. He also questioned the wisdom and affordability of pursuing all three of the Services' planned next-generation tactical fighter programs (the F/A-18E/F, the F-22 and the F-35 JSF) Although the specifics of this strategy were never spelled out, it also appeared to involve placing greater reliance on less costly current-generation systems (both modifications and upgrades of existing systems, and new production of current-generation systems). In addition, during the QDR process, the administration apparently considered the possibility of making some cuts in the size of the US military's force structure (e.g., number Army divisions and Navy carrier battle groups), as a way of paying for some of the needed increase in procurement funding.

In the end, however, the administration opted to embrace, with a few modifications, essentially the same modernization plan it inherited from the previous administration. No major weapons programs were cancelled or scaled back, and no offsetting reductions in force structure were offered. The long-term cost of this plan can be only roughly estimated, given uncertainty concerning the cost of some future weapon systems and other factors. However, a reasonable estimate is that procurement funding would need to be increased to some $80-95 billion (FY 2003 dollars).[29] This estimate assumes that DoD would replace its existing weapons inventory on a one-for-one basis, and that it would replace its existing weapons inventory primarily with costly next-generation weapon systems. The lower figure assumes that the Services would be relatively successful at meeting their current cost goals for new weapons programs, while the higher figure assumes that, consistent with historical experience, most next-generation weapon systems would end up costing substantially more to procure than projected by the Services.

If this estimate is correct, the level of procurement funding projected in the administration's plan would appear to be roughly adequate, at least by FY 2007. If one believes that the main problem with the previous administration's modernization plan was that it might not have provided the resources actually needed to implement it, then the Bush Administration's proposal should be given relatively high marks. Not only does the plan project a large increase in procurement funding, but it makes more realistic assumptions about the cost of new weapons programs. The FY 2003 request includes $3.7 billion to cover cost growth in a variety of weapons programs, including the F-22 fighter and several shipbuilding programs. And the administration has announced that in the future, where there is substantial disagreement, it will accept the (generally

[29] This is similar to an estimate of steady-state costs made by CBO. Lane Pierrot, *Budgeting for Defense: Maintaining Today's Forces*, (Washington, DC: CBO, September 2000). CSBA uses a methodology similar to that employed by CBO to project future procurement funding requirements and, in many cases, relies on CBO's cost estimates for major next-generation weapons programs. Thus, it would be surprising if the two estimates differed substantially.

higher) cost estimates for major weapons programs produced by DoD's independent Cost Analysis Improvement Group (CAIG) over the Services' own estimates.

On the other hand, as noted earlier, the new plan's assumptions about O&M cost growth, though generally reasonable, may be overly optimistic for FY 2006 and FY 2007. If, rather than staying essentially flat over those years, as assumed in the administration's plan, O&M costs continue to grow, DoD may find itself with little choice but to forego the rise in procurement funding and use the money instead to cover readiness-related costs. This could be troubling because over half the planned increase in funding for procurement in the administration's FY 2003-07 Future Years Defense Program (FYDP) is projected to occur in those last two years.

Figure 2: Procurement Funding per Troop (FY 2003 dollars)

In any case, the fact that implementing the administration's modernization plan would require increasing funding to $80-95 billion a year does not necessarily mean that adequately modernizing US forces would require increases of this magnitude. The administration's current approach is but one of several different possible approaches to modernization. At the most basic level, there are essentially three different means by which forces can be modernized:

- Existing current-generation systems (e.g., F-15 and F-16 fighters) can be replaced with next-generation weapon systems (e.g., the F-22 and JSF). Next-generation weapon systems are likely to display the most dramatic improvements in capabilities. But they are also by far the most expensive systems to produce—typically costing at least twice as much as the systems they are intended to replace.

- Existing current-generation systems can be replaced with the latest versions of the same systems (e.g., old F-16s replaced with the latest versions of the F-16 now being produced). Often the latest versions of these systems are far more capable than the earlier versions they

would replace. According to the Air Force, the latest Block 60 F-16s, for example, are as much as five times more effective than the earliest version of the F-16.[30] These systems also tend to cost much less to produce than next-generation systems. For example, the Air Force version of the JSF is likely to cost about $65 million apiece compared to $30 million each for the latest F-16s.

- Existing current-generation systems can be upgraded with new electronics and other equipment, and have their service lives extended (e.g., old AV-8B Harrier short take-off vertical landing aircraft can be upgraded to the most modern AV-8B Harrier standards). For example, according to one estimate, incorporating a new data link in existing F-15s, which would allow aircraft to share target information, could yield a five-fold improvement in air-to-air kill ratios.[31] The cost of upgrade and modification efforts varies greatly, depending on how extensive the efforts are, but they tend to be lower than the cost of buying new current-generation systems.

The administration's plan includes a mix of these different approaches. But it is heavily weighted toward the first approach: the acquisition of next-generation weapon systems. Thus, not surprisingly, its funding requirements are very high. Other approaches could be substantially less costly. An approach that included the purchase of some next-generation weapon systems, but focused relatively more on the production of new current-generation systems and upgrades of existing systems—perhaps similar to the skip-a-generation approach that was apparently considered, but ultimately rejected, by the Bush administration—might cost some $70-80 billion a year. Another option would be to move ahead with procurement of the next-generation weapon systems called for under current plans, but to offset the high cost of these plans by making cuts in the size of the force structure. This would be consistent with earlier decisions to trade-off quantity for quality. Viewed from a long-term perspective, DoD's past modernization efforts have often been financed in part by cuts in the size of the military. Still another option would be to combine cuts in next-generation weapons programs with force structure cuts. In this case, annual procurement funding requirements might fall to less than $70 billion a year.

In short, there is no single answer to the question of how much the United States must spend to modernize its military—the answer depends on the kind and rate of modernization that is believed to be necessary. In turn, one's answers to these questions are likely to be influenced by views concerning a broad range of other, largely non-budgetary, issues, including: the strategy and missions of the US military; the pace of modernization among potential adversaries; changes in expected standards of performance for US forces; the nature and pace of advances in weapons platform design and propulsion, PGMs and computers, sensors and communications technologies; and the impact and implications of the RMA. Reasonable minds can and do differ greatly on these questions. For example, some observers believe that the projected aging of the Services' inventories of aircraft, ships and other weapons platforms could greatly reduce the

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[30] "F-16 Celebrates 25 Years of Flying High," Air Force Press Release, February 22, 1999, p. 2.

[31] *Report of the House Committee on Appropriations, Department of Defense Appropriations Bill, 2000* (Washington, DC: GPO, July 29, 1999), p. 19.

effectiveness of the US military, while others believe that even relatively old platforms can be kept highly effective through the incorporation of new electronics and PGMs.

MISSILE DEFENSE

The Bush Administration's FY 2003 defense budget request includes about $7.8 billion for BMD programs. This includes $6.7 billion provided through the Missile Defense Agency (formerly the Ballistic Missile Defense Organization (BMDO) and $1.05 billion funded through the Services' budgets. This is roughly the same level of funding provided for BMD programs in FY 2002, but some $2.3 billion more than was appropriated for FY 2001.

The $7.8 billion figure includes funding both for the development of national missile defense (NMD) systems, designed to protect the United States from strategic ballistic missile attack, and the development and deployment of theater missile defense (TMD) systems, intended to protect forward-deployed US forces against shorter-range ballistic missiles. The FY 2002 request marked a significant departure from the previous administration's plans, not only in terms of overall spending levels, but in its allocation of funding as well. The FY 2003 request continues this new approach.

Under the Clinton Administration, BMD efforts were focused on the development and near-term deployment of a variety of TMD systems, and the development, and the deployment at some future date, of a limited NMD system. The system proposed by the Clinton Administration was initially to consist of 20 (and later 100) ground-based missile interceptors located at a single site in Alaska, and would be designed to provide protection against a limited nuclear attack (e.g., an accidental launch from Russia or a strike from a rogue state armed with a small number of nuclear weapons). The Clinton Administration believed that the Anti-Ballistic Missile (ABM) Treaty—by which the United States and the Soviet Union (now Russia) agreed to limit the development and, especially, deployment of NMD systems—still had an important role to play in maintaining a stable nuclear balance between the United States and Russia, as well limiting the incentive for China to buildup its strategic nuclear forces. As a result, while its proposed NMD system conflicted with the ABM Treaty in a number of ways, it hoped to get around this problem by gaining Russian agreement to modify the treaty, rather than by withdrawing from it.

In any case, at the end of his term in office, President Clinton decided that given technical problems (two of the first three test intercepts were unsuccessful) it would be premature to commit to the deployment of the proposed NMD system. And DoD's Director of Operational Testing and Evaluation indicated that, due to testing requirements, the earliest deployment date for the system had likely slipped from 2005 to 2006 or 2007.

For his part, President Bush has made the near-term deployment of an NMD system one of his top priorities. Late in 2001, the administration announced its intention to withdraw from the ABM Treaty. The administration has also stated that it will try to achieve an initial operational capability for an NMD system within the 2004-08 timeframe. In addition, the administration has indicated that it plans to develop and eventually deploy a much broader range of NMD systems than did the previous administration. It has indicated that it intends to pursue not only a fixed, land-based system (similar to the system proposed by the Clinton Administration), but also sea-

based and space-based systems, designed to intercept incoming ballistic missiles at all stages of flight (e.g., boost, mid-course and terminal phases).

The administration's FY 2003 request for MDA programs includes $3.193 billion for the Midcourse Defense Segment, $1.066 billion for the BMD Segment, $797 million for the Boost Defense Segment, $373 million for the Sensor Segment, and $935 million for the Theater High-Altitude Area Defense (THAAD) system.

Whatever the merits or shortcomings of the Bush Administration's approach to BMD on technical or strategic grounds, pursuing this course will likely require a substantial and sustained increase in funding. The administration estimates that overall BMD-related funding will need to be increased to $11.1 billion in FY 2007. The cost of developing and deploying a multi-layered NMD system could be especially high. In January 2002, CBO estimated that developing, deploying and operating a single-site NMD system similar to the one proposed by the Clinton Administration would require spending $23-25 billion through 2015, while a three-site system could cost $56-64 billion.[32] Likewise, CBO estimated that a stand-alone, sea-based system would cost $43-55 billion and a space-based laser system might cost $56-68 billion. There is some overlap among these different systems, especially between the land- and sea-based proposals. Thus, the total cost of a multi-layered system might be less than the simple sum of these three elements. Nevertheless, CBO's estimates clearly suggest that the total cost of such a system could be very high.

The potentially high cost of pursuing a multi-layered NMD system does not necessarily mean that the administration's missile defense plans are unaffordable. In the context of an overall defense budget of over $350 billion a year, spending $7.8 to $11.1 billion or even significantly more on BMD programs should be manageable. However, doing so may make it difficult for the administration to fund other new initiatives, including efforts aimed at transforming various elements of the US military.

MAJOR ACQUISITION PROGRAMS

(See Appendix, Table 6)

Air Force

The Air Force's FY 2003 budget request includes $27.3 billion for procurement and $17.6 billion for R&D.[33]

F-22: The budget request includes $4.621 billion to procure 23 F-22 fighters, plus $627 million for continued development of the aircraft. The F-22 is intended eventually to replace much of the

[32] CBO, "Estimated Costs and Technical Characteristics of Selected National Missile Defense Systems," Letter to the Honorable Thomas A. Daschle, Majority Leader, United States Senate, January 31, 2002, p. 23.

[33] These Air Force figures and the total procurement and R&D figures given for the other Services below do not include funding provided through the DERF.

Air Force's existing fleet of F-15 air superiority fighters. The Air Force estimates that the F-22 program will cost a total of about $70 billion, some $31 billion of which has already been appropriated. Due to problems with cost growth, the Air Force recently reduced the planned purchase of F-22 fighters from 331 to 295. However, under current plans, the Service would still be allowed to buy as many as 331 F-22s if it can successfully meet its earlier cost goals. Initial operational capability for the F-22 is projected for FY 2005.

Joint Strike Fighter: The proposed FY 2003 budget would provide $3.471 billion for the JSF. Last year, Lockheed Martin Corporation defeated the Boeing Company in a competition to develop and produce the JSF. This year's request includes $1.744 billion in Air Force and $1.728 billion in Navy funding for the program, which is intended to lead eventually to the fielding of a family of affordable fighter aircraft to be used by the Air Force, Navy and Marine Corps. Previously, President Bush had expressed some doubts about the wisdom and affordability of moving ahead with all three of the Services' new tactical fighter programs, and it appeared that the JSF program might be scaled back. However, ultimately, the administration decided to fully approve the JSF (as well as the other two fighter programs). Under current plans, the Services' would buy a total of 2,852 JSF. The CBO has estimated that the total cost of this revised program will likely reach $223 billion (FY 2000 dollars). The aircraft is expected to enter service around FY 2011.

B-2: The administration is requesting $297 million for the B-2 strategic bomber program in FY 2003, primarily for the development of modifications and upgrades for the existing fleet of 21 aircraft. In the 2001 QDR, the administration indicated that it believed that greater emphasis should be placed on long-range, precision-strike capabilities. This conclusion, combined with the important role played by bombers in the conflict in Afghanistan, suggested to some that the administration might propose to reopen the B-2 bomber production line. However, in the end, the administration decided to forego the production of any additional B-2 bombers.

Unmanned Aerial Vehicles: The FY 2003 request includes $1.119 billion in acquisition-related funding for six different UAV programs. This represents about a $148 million increase from FY 2002 and a $759 million boost from FY 2001. More than half of this funding ($629 million) is for the Global Hawk program. Global Hawk is a long-range reconnaissance UAV. Although still not entirely through the R&D process, the Global Hawk has already been used successfully in Afghanistan. Other UAV programs funded in the request include the Predator (Air Force), Shadow (Army) and Fire Scout (Navy) programs, which would be provided some $299 million. In addition, working in conjunction with the Defense Advanced Research Projects Agency (DARPA), the Air Force and the Navy are each pursuing an unmanned combat air vehicle (UCAV) program. Under the administration's plan, a combined total of about $191 million would be provided for these two programs in FY 2003.

C-17: The administration's request includes $3.984 billion for the C-17 program in FY 2003, including $3.827 billion for the procurement of 12 of the intercontinental-range cargo aircraft and $157 million for further R&D. To date, the Air Force has procured 112 C-17s. Originally, the Air Force had hoped to buy a total of 210 C-17s. The number was later reduced to 120 aircraft. Under the latest plan, however, a further 60 C-17s are now projected to be procured, and the Air Force would like to buy as many as 222 C-17s altogether.

Space-Based Infrared System (SBIRS)-High: The FY 2003 budget request includes $815 million for the SBIRS-High program. The goal of this program is to field a constellation of satellites to provide improved warning of ballistic missile strikes (replacing existing Defense Support Program satellites), as well as support national missile defense and intelligence collection efforts. The first launch of a SBIRS-High satellite is scheduled for 2007.

Navy

The Navy's FY 2003 budget request includes $24.9 billion for procurement and $12.5 billion for R&D.

F/A-18E/F: The administration is requesting $3.267 billion for the F/A-18E/F aircraft program in FY 2003, including $107 million for continued development, $3.16 billion to procure 44 aircraft. In production since FY 1997, the F/A-18E/F is a substantially changed derivative of the older A-D versions of the F/A-18, featuring, among other things, a longer fuselage and larger wings. The aircraft is intended to replace earlier models of the F/A-18, as well as A-6E and F-14 aircraft, aboard US aircraft carriers. The 1997 QDR reduced the projected purchase from 1,000 to 548-785 aircraft, and the Bush Administration has reaffirmed this goal. The higher number represents the number of F/A-18E/Fs that might be procured if the JSF were to develop technical problems, could not meet its cost goals, or suffers significant slippage in its schedule. The Navy estimates that the purchase of 548 aircraft would cost about $47 billion.

V-22: The proposed budget would provide $497 million in R&D funding for the V-22 tilt-rotor, vertical take-off and landing aircraft, plus $1.323 billion in procurement funding to buy 11 Marine Corps versions of the aircraft (MV-22) and $174 million in advance procurement funding for future purchases of the Air Force's version on the aircraft, the CV-22. The V-22 program has been plagued by technical problems in recent years. Nevertheless, the administration has decided to move ahead with the program, albeit at a slower pace than previously planned. Under the current plan, V-22 production would be limited to the "minimum sustaining rate" as the program continues to make its way through the R&D and flight testing process. Ultimately, the Marine Corps plans to buy a total of 360 MV-22s, while the Air Force expects to buy 50 CV-22s. The Navy plans to purchase 48 CV-22s. The MV-22 is intended to replace the Marine Corps' CH-46 and CH-53 helicopters, while the CV-22 would be used for special operations forces (SOF) and the HV-22 would be used for search and rescue.

DDG-51: The administration's FY 2003 request includes $2.219 billion for the procurement of two DDG-51 Arleigh Burke-class guided missile destroyers, as well as $238 million for R&D. The Navy also plans to buy two DDG-51s per year over the FY 2004-07 period. By contrast, in recent years the Navy has typically procured three DDG-51 each year.

DD(X): The Bush Administration has terminated the Navy's DD-21 program. Unlike the DDG-51, which is focused primarily on the air defense mission, the DD-21 was to be designed with a special focus on land-attack capabilities. Under the administration's new plan, funding for the DD-21 would be shifted to the DD(X) program. According to the administration, unlike the DD-21, which was intended to be the first ship of a new class, the DD(X) would serve as a test bed for new technologies that could be applied to a family of new ship classes, including not only a

surface combatant largely focused on the land-attack mission, but also a future air defense cruiser and a surface combatant focused on littoral operations. Moreover, the administration has indicated that no decision about beginning serial production of a new class of ships will be made until the DD(X) program is much further along. The significance of this change in shipbuilding plans is, however, somewhat unclear. The Navy plans to award a contract for design of the DD(X) early this year and to begin construction of this ship in FY 2005, the same year projected for DD-21. As such, it may be difficult to develop a ship that incorporates technologies significantly different from those already projected for the DD-21.

SSN-774: The administration's FY 2001 request includes $2.219 billion in procurement funding for one Virginia-class attack submarine, plus $238 million for R&D. This class of submarines is being built jointly by Electric Boat of General Dynamics, Groton, CT, and Newport News Shipbuilding (NNS) of Newport News, VA. Under the administration's new defense plan, the Navy would buy one Virginia-class submarine a year through FY 2007. Ultimately, the Navy hopes to reach a production rate of at least two SSN-774s per year.

LPD-17: This year's request includes $615 million to procure a fifth LPD-17 class amphibious transport ship. Navy plans call for procuring one LPD-17 per year over the FY 2004-07 period as well. Altogether, the Navy plans to purchase a total of 12 ships of this class. The FY 2003 request also includes funding to cover some of the cost growth associated with the construction of the LPD-17's approved in prior years.

SSGN Conversions: One of the major initiatives related to transforming the US military included in the FY 2003 budget request is represented by the administration's decision to convert four Trident ballistic missile submarines to guided missile submarines. Absent such conversions, these submarines are slated for retirement (though they have 20 years of service life remaining in their hulls). When converted, each of the four SSGNs will be capable of carrying 154 long-range Tomahawk cruise missiles. The request would provide a total of $1.018 billion for this effort in FY 2003, including $825 million in procurement funding to refuel the first two submarines and begin work related to their conversion in FY 2004.

CVN(X): The administration's new defense plan would push back construction of the CVN(X), the lead ship of a new class of aircraft carrier, from FY 2006 to FY 2007. In 1998, the Navy decided to adopt an evolutionary approach to designing this new class of aircraft carrier. Under this plan, the first ship of this class will closely resemble existing Nimitz-class carriers, while succeeding ships might differ substantially from that class. The FY 2003 budget request would continue to provide R&D funding to support this evolutionary approach to the CVN(X).

Army

The Army's FY 2003 budget request includes $13.8 billion for procurement and $6.9 billion for R&D.

Longbow Apache: The FY 2003 budget request would provide $942 million for the Longbow Apache upgrade program. Under the Longbow Apache program, a portion of the Apache fleet

will be equipped with a mast-mounted fire control radar, and all of the existing Apaches will be upgraded to carry the radar-frequency, fire-and-forget version of the Hellfire missile.

Comanche: The administration is requesting $910 million for continued development of the RAH-66 Comanche armed reconnaissance helicopter. The RAH-66 is intended eventually to replace the Army's existing fleet of OH-58 and AH-1 scout and attack helicopters. Ultimately, the Army hopes to procure some 1,200 of these helicopters, with production scheduled to begin around the middle of the decade.

Interim Armored Vehicles (IAV): The IAV program represents a key element in the Army's transformation plans. The IAV is intended to provide a relatively light and easily deployable combat vehicle to bridge the gap between today's lethal, but relatively heavy forces, and the more capable and deployable systems being developed under the Future Combat System (FCS) program—which is expected to lead to the fielding of new capabilities starting around 2010. The FY 2003 request would provide $124 million for R&D and $812 million in procurement funding to buy 332 vehicles.

Future Combat System (FCS): Through the FCS program, the Army plans to develop a family of combat vehicles and other systems with which to equip the Army's "Objective Force"—the Army projected for 2010 and beyond. This forces is expected to be both more deployable than today's forces and more lethal and survivable than the interim forces presently being procured. The FY 2003 budget request includes $707 million for the FCS program.

M-1 Tank: The budget request provides $431 million to upgrade older M-1 Abrams tanks to the M-1A2 model, including $376 million in procurement funding and $54 million for R&D. The modifications include improved armor, a 120mm gun and digitized communications.

Bradley Fighting Vehicle (BFV): The FY 2003 budget request includes $397 million to fund upgrades to existing BFVs. The upgrades include modifying first- and second-generation BFVs to the current M2A2 configuration, as well as a M2A3 upgrade program. M2A3 upgrades include enhanced command and control capabilities, and lethality and survivability improvements.

Crusader: The administration is requesting $475 million in FY 2003 for development of the Crusader artillery system and the artillery resupply vehicle (RSV). Because of the relatively high weight of the system, questions about its cost and the availability of alternatives, the Crusader was widely viewed as a possible target for cancellation during the Bush Administration's defense review. However, the administration decided to continue the program. The Crusader is projected to move from R&D into production after the middle of the decade. Total acquisition costs are estimated to be about $10 billion.

MILITARY CONSTRUCTION AND FAMILY HOUSING

The administration is requesting $4.8 billion for military construction and $4.2 billion for family housing in FY 2003. The proposed funding level for military construction represents a $1.7 billion decline from this year's level. According to the administration, this reduction reflects a

decision to delay military construction projects until after 2005, when a new round of base closures is scheduled to begin. It argues that substantially increased funding prior to 2005 does not make sense because it might lead to spending money on many bases that could be closed a short time later. Under the administration's plan, military construction funding would, however, be increased dramatically after FY 2005, reaching $10.8 billion in FY 2006 and $13.8 billion in FY 2007. As noted earlier, the FY 2003 request would also provide improved housing allowance benefits for service members.

DoE Defense Activities

The administration's FY 2003 request would provide $16.458 billion for Atomic energy defense activities. The request includes $5.869 billion for weapons activities and $4.558 billion for defense environmental restoration and waste management activities. The request would also provide $1.114 billion for non-proliferation programs and $708 million to support naval nuclear reactor programs. About $8 billion of DoE funding would come under the purview of the National Nuclear Security Administration, which was established in the FY 2000 defense authorization act, among other things, to improve management and security at DoE weapons labs.

III. TABLES AND GRAPHS

Table 1

National Defense Budget Authority and Outlays*

(in billions of current dollars)

	FY 80	~ FY 85	~ FY 90	~ FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	**FY 03**	FY 04	FY 05	FY 06	FY 07
Budget Authority																
DoD (051)	140.7	286.8	293.1	255.7	254.6	258.0	258.6	278.6	290.5	313.0	333.0	**378.6**	387.4	408.3	429.2	450.9
DoE & Other	3.2	7.8	10.3	10.7	11.6	12.3	12.7	13.7	13.6	16.0	17.7	**18.2**	18.2	18.3	18.6	18.8
National Defense (050)	143.9	294.7	301.2	266.4	266.2	270.3	271.3	292.3	304.1	329.0	350.7	**396.8**	405.6	426.6	447.7	469.8
real change					*-2.2%*	*-0.6%*	*-2.0%*	*5.2%*	*1.4%*	*5.0%*	*3.5%*	***10.7%***	*-0.1%*	*2.7%*	*2.5%*	*2.5%*

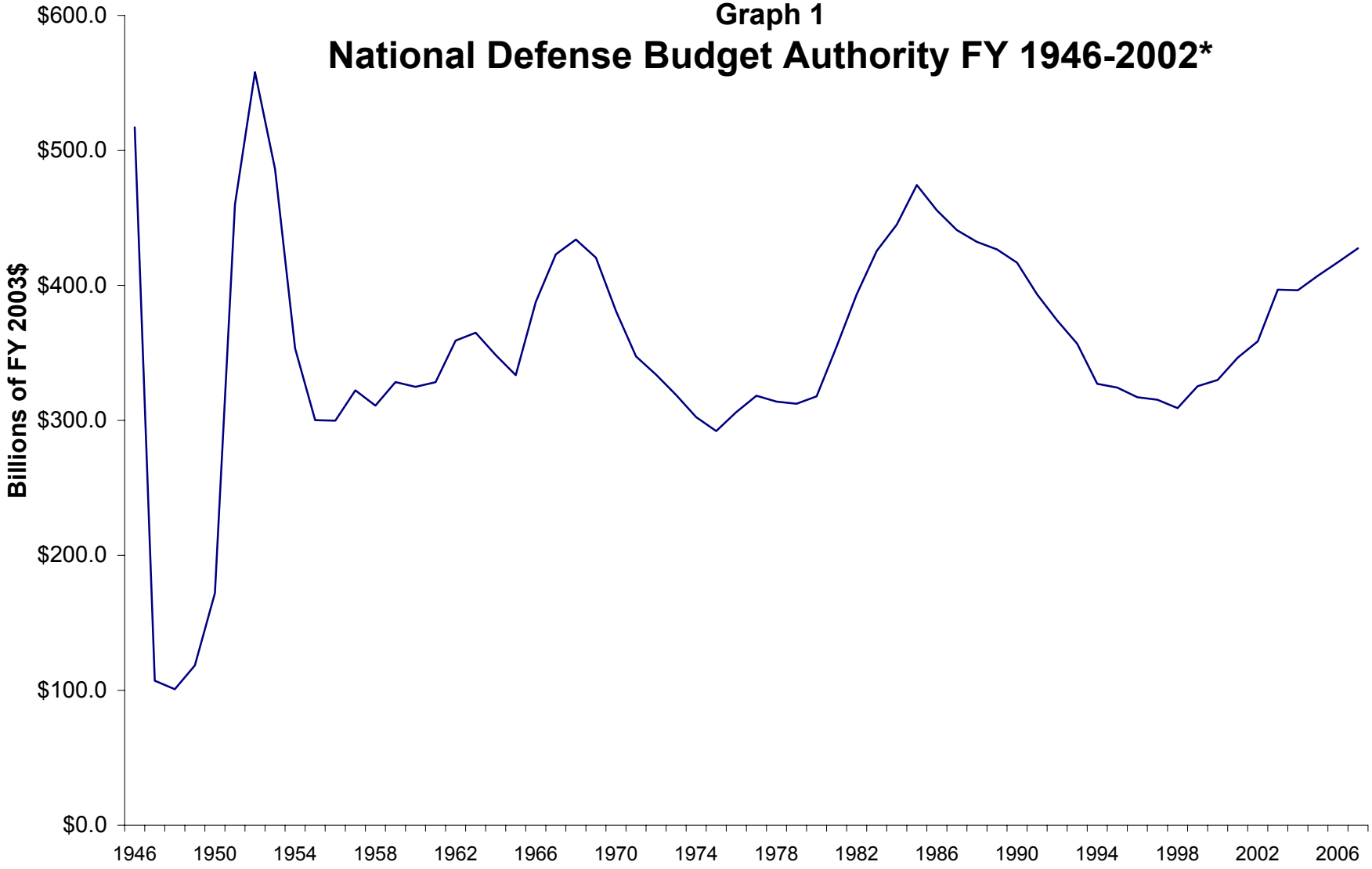
	FY 80	~ FY 85	~ FY 90	~ FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	**FY 03**	FY 04	FY 05	FY 06	FY 07
Outlays																
DoD (051)	130.9	245.2	288.3	258.4	252.7	258.2	256.1	261.4	281.2	294.0	330.6	**361.0**	375.6	395.2	410.2	423.9
DoE & Other	3.1	7.6	9.6	12.6	12.6	12.2	12.3	13.5	13.3	14.5	17.4	**18.0**	18.2	18.3	18.4	18.6
National Defense (050)	134.0	252.7	297.9	271.0	265.2	270.4	268.4	274.9	294.5	308.5	348.0	**379.0**	393.8	413.5	428.5	442.5
real change					*-4.1%*	*-0.5%*	*-2.9%*	*0.5%*	*4.3%*	*1.7%*	*9.3%*	***6.7%***	*1.5%*	*2.6%*	*1.2%*	*0.8%*

Source: CSBA, February 2002. Based on DoD and OMB data.

**Excludes* funding for Desert Shield/Storm and allied Gulf War cash contributions.

Graph 1

National Defense Budget Authority FY 1946-2002*



Source: CSBA, February 2002. Based on DoD data.

**Excludes* funding for Desert Shield/Desert Storm and allied Gulf War cash contributions.

Table 2

National Defense (050) Budget Authority, FY 1960-FY 2007*

(by fiscal year in billions of dollars)

	Current Dollars	*FY 2003 Dollars*	*% real change*
1960	44.3	324.8	*(1.1%)*
1961	45.1	328.2	*1.0%*
1962	50.2	359.1	*9.4%*
1963	52.1	364.9	*1.6%*
1964	51.6	348.4	*(4.5%)*
1965	50.6	333.5	*(4.3%)*
1966	64.4	387.7	*16.3%*
1967	73.1	423.1	*9.1%*
1968	77.8	434.0	*2.6%*
1969	78.5	420.5	*(3.1%)*
1970	75.3	380.9	*(9.4%)*
1971	72.7	347.4	*(8.8%)*
1972	76.4	333.8	*(3.9%)*
1973	79.1	318.8	*(4.5%)*
1974	81.5	302.4	*(5.2%)*
1975	86.2	292.1	*(3.4%)*
1976	97.3	306.1	*4.8%*
1977	110.2	318.3	*4.0%*
1978	117.2	313.9	*(1.4%)*
1979	126.5	312.3	*(0.5%)*
1980	143.9	317.8	*1.7%*
1981	180.0	354.7	*11.6%*
1982	216.5	393.3	*10.9%*
1983	245.0	425.5	*8.2%*
1984	265.2	445.0	*4.6%*
1985	294.7	474.3	*6.6%*
1986	289.1	455.6	*(4.0%)*
1987	287.4	440.9	*(3.2%)*
1988	292.0	432.2	*(2.0%)*
1989	299.6	426.7	*(1.3%)*
1990	301.2	416.8	*(2.3%)*
1991	296.2	393.3	*(5.6%)*
1992	287.7	374.0	*(4.9%)*
1993	281.1	356.8	*(4.6%)*
1994	263.3	327.0	*(8.3%)*
1995	266.4	324.2	*(0.9%)*
1996	266.2	317.2	*(2.2%)*
1997	270.3	315.2	*(0.6%)*
1998	271.3	309.1	*(2.0%)*
1999	292.3	325.3	*5.2%*
2000	304.1	329.9	*1.4%*
2001	329.0	346.5	*5.0%*
2002	350.7	358.5	*3.5%*
2003	**396.8**	**396.8**	***10.7%***
2004	405.6	396.4	*(0.1%)*
2005	426.6	407.1	*2.7%*
2006	447.7	417.2	*2.5%*
2007	469.8	427.5	*2.5%*

Source: CSBA, February 2002. Based on DoD and OMB data.

**Excludes* funding for Desert Shield/Storm and allied Gulf War contributions. Funding for FY 2002 is estimated; funding for FY 2003-07 is proposed.

Table 3

National Defense (050) Outlays, FY 1960-FY 2007*

(by fiscal year in billions of dollars)

	Current Dollars	*FY 2003 Dollars*	*% real change*
1960	48.1	353.1	*0.1%*
1961	49.6	352.5	*(0.2%)*
1962	52.3	372.8	*5.8%*
1963	53.4	377.1	*1.2%*
1964	54.8	373.3	*(1.0%)*
1965	50.6	341.6	*(8.5%)*
1966	58.1	365.2	*6.9%*
1967	71.4	422.1	*15.6%*
1968	81.9	460.0	*9.0%*
1969	82.5	448.6	*(2.5%)*
1970	81.7	416.2	*(7.2%)*
1971	78.9	379.6	*(8.8%)*
1972	79.2	351.9	*(7.3%)*
1973	76.7	320.8	*(8.8%)*
1974	79.3	307.2	*(4.3%)*
1975	86.5	300.1	*(2.3%)*
1976	89.6	290.6	*(3.2%)*
1977	97.2	293.0	*0.8%*
1978	104.5	293.3	*0.1%*
1979	116.3	302.4	*3.1%*
1980	134.0	310.2	*2.6%*
1981	157.5	324.5	*4.6%*
1982	185.3	347.0	*6.9%*
1983	209.9	374.8	*8.0%*
1984	227.4	390.0	*4.1%*
1985	252.7	414.5	*6.3%*
1986	273.4	436.0	*5.2%*
1987	282.0	437.4	*0.3%*
1988	290.4	435.8	*(0.4%)*
1989	303.6	437.1	*0.3%*
1990	297.9	416.8	*(4.6%)*
1991	296.7	397.9	*(4.5%)*
1992	286.1	372.3	*(6.5%)*
1993	283.9	359.0	*(3.5%)*
1994	278.9	344.4	*(4.1%)*
1995	271.0	329.1	*(4.5%)*
1996	265.2	315.5	*(4.1%)*
1997	270.4	313.8	*(0.5%)*
1998	268.4	304.8	*(2.9%)*
1999	274.9	306.3	*0.5%*
2000	294.5	319.5	*4.3%*
2001	308.5	324.9	*1.7%*
2002	348.0	355.2	*9.3%*
2003	**379.0**	**379.0**	***6.7%***
2004	393.8	384.9	*1.5%*
2005	413.5	394.9	*2.6%*
2006	428.5	399.4	*1.2%*
2007	442.5	402.5	*0.8%*

Source: CSBA, February 2002. Based on DoD and OMB data.

**Excludes* funding for Desert Shield/Storm and allied Gulf War contributions. Funding for FY 2002 is estimated; funding for FY 2003-07 is proposed.

Table 4

Department of Defense (051) Budget Authority by Title*

(in billions of dollars)

Current Dollars	FY 80	~ FY85	~ FY 90	~ FY 93	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	**FY 03**
Personnel	41.1	67.8	78.9	76.0	71.4	71.6	69.8	70.3	69.8	70.6	73.8	76.9	82.0	**94.3**
O&M	46.4	77.8	88.4	89.2	88.6	93.8	93.7	92.4	97.2	105.0	108.8	117.7	129.8	**150.4**
Procurement	35.3	96.8	81.4	52.8	44.1	43.6	42.4	43.0	44.8	51.1	55.0	62.6	61.1	**68.7**
RDT&E	13.6	31.3	36.5	37.8	34.6	34.5	35.0	36.4	37.1	38.3	38.7	41.7	48.6	**53.9**
Military Construction	2.3	5.5	5.1	4.6	6.0	5.4	6.9	5.7	5.5	5.4	5.1	5.5	6.6	**4.8**
Family Housing	1.5	2.9	3.1	3.9	3.5	3.4	4.3	4.1	3.8	3.6	3.5	3.7	4.1	**4.2**
Other	0.5	4.7	-0.4	3.0	3.1	3.4	2.4	6.1	0.3	4.6	5.6	4.9	0.9	**2.3**
DoD	140.7	286.8	293.0	267.2	251.4	255.7	254.4	258.0	258.6	278.6	290.5	313.0	333.0	**378.6**

FY 2003 Dollars	FY 80	~ FY85	~ FY 90	~ FY 93	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	**FY 03**
Personnel	119.6	123.4	123.6	105.7	96.9	94.8	90.4	88.5	84.7	83.2	83.2	83.9	84.8	**94.3**
O&M	93.7	126.9	123.3	113.8	110.1	114.2	111.6	107.8	110.5	116.7	118.5	123.3	132.4	**150.4**
Procurement	69.1	144.0	101.8	61.4	50.4	49.0	47.1	46.9	48.5	54.5	57.7	64.7	62.1	**68.7**
RDT&E	26.5	47.8	46.7	44.7	40.1	39.3	39.0	40.0	40.3	41.1	40.8	43.2	49.3	**53.9**
Military Construction	4.3	8.4	6.5	5.4	6.9	6.2	7.7	6.3	6.0	5.8	5.4	5.7	6.7	**4.8**
Family Housing	3.0	4.3	4.0	4.6	4.0	3.8	4.7	4.5	4.1	3.8	3.7	3.8	4.1	**4.2**
Other	1.2	7.5	-0.4	3.8	3.9	4.2	2.9	7.1	0.4	5.1	6.0	5.1	0.9	**2.3**
DoD	310.7	461.7	405.4	339.1	312.2	311.3	303.3	300.8	294.6	310.0	315.1	329.6	340.4	**378.6**

Source: CSBA, February 2002. Based on DoD and OMB data.

**Includes* funding for Desert Shield/Storm and allied Gulf War cash contributions.

Table 5

Department of Defense (051) Outlays by Title*

(in billions of dollars)

Current Dollars	FY 80 ~	FY85 ~	FY 90 ~	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	**FY 03**
Personnel	40.9	67.8	75.6	75.9	73.1	70.8	66.7	69.7	69.0	69.5	76.0	74.0	81.2	**92.8**
O&M	44.8	72.4	88.3	94.1	87.9	91.1	88.8	92.5	93.5	96.4	105.9	114.0	133.6	**143.5**
Procurement	29.0	70.4	81.0	69.9	61.8	55.0	48.9	47.7	48.2	48.8	51.7	55.0	59.6	**62.3**
RDT&E	13.1	27.1	37.5	37.0	34.8	34.6	36.5	37.0	37.4	37.4	37.6	40.6	45.1	**50.8**
Military Construction	2.5	4.3	5.1	4.8	5.0	6.8	6.7	6.2	6.0	5.5	5.1	5.0	5.7	**6.0**
Family Housing	1.7	2.6	3.5	3.3	3.3	3.6	3.8	4.0	3.9	3.7	3.4	3.5	3.8	**3.9**
Other	-1.1	0.6	-1.2	-6.4	2.7	-2.4	1.8	1.2	-1.9	0.1	1.6	1.9	1.7	**1.7**
DoD	130.9	245.2	289.8	278.6	268.6	259.4	253.2	258.3	256.1	261.4	281.2	294.0	330.6	**361.0**

FY 2003 Dollars	FY 80 ~	FY85 ~	FY 90 ~	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02	**FY 03**
Personnel	119.8	123.6	119.5	105.7	98.9	93.8	87.0	87.8	83.8	82.0	85.4	80.9	83.9	**92.8**
O&M	92.2	119.0	124.0	119.2	109.1	110.9	105.9	107.4	106.1	107.3	115.2	119.3	136.1	**143.5**
Procurement	65.1	106.4	103.8	81.5	70.6	61.6	53.8	51.5	51.7	51.9	54.2	56.6	60.4	**62.3**
RDT&E	26.8	41.7	48.6	43.8	40.3	39.4	40.7	40.5	40.5	40.1	39.7	42.0	45.7	**50.8**
Military Construction	5.1	6.7	6.6	5.7	5.8	7.7	7.4	6.8	6.5	5.9	5.4	5.2	5.8	**6.0**
Family Housing	3.3	4.0	4.5	3.9	3.8	4.0	4.2	4.3	4.2	3.9	3.6	3.6	3.8	**3.9**
Other	-2.4	0.9	-1.7	-8.1	3.4	-2.9	2.2	1.4	-2.1	0.1	1.7	2.0	1.7	**1.7**
DoD	303.1	402.1	405.5	352.3	331.8	315.0	301.1	299.7	290.8	291.2	305.1	309.6	337.4	**361.0**

Source: CSBA, February 2002. Based on DoD and OMB data.

**Includes* funding for Desert Shield/Storm and allied Gulf War cash contributions.

Table 6
FY 2003 Request for Selected Weapon Systems

	Qty	Proc	R&D	Total
Tactical Aircraft				
F-22 Raptor*	*23*	4,621.0	627.3	5,248.3
F/A-18 E/F Super Hornet*	*44*	3,159.5	107.8	3,267.3
Joint Strike Fighter (JSF)		1,727.5	1,743.7	3,471.2
Other Aircraft				
C-17 Cargo Aircraft*	*12*	3,826.7	157.2	3,983.9
C-130	*0*	194.6	169.0	363.6
KC-130	*4*	334.0	0.0	334.0
JPATS	*35*	211.8	0.0	211.8
T-45 Goshawk*	*8*	221.4	0.0	221.4
E-2C Hawkeye*	*5*	295.5	19.0	314.5
V-22 Osprey*	*11*	1,497.2	496.8	1,994.0
E-8 Joint Stars*	*1*	279.3	55.5	334.8
Submarine Programs				
NSSN/New Generation Sub.*	*1*	2,219.0	238.4	2,457.4
Other Ships				
CVNX-1		243.7	359.7	603.4
DDG-51 Destroyer*	*2*	2,369.5	300.7	2,670.2
LPD-17	*1*	604.5	10.1	614.6
LHD-1	*1*	253.0	0.0	253.0
T-AKE	*1*	338.8	0.0	338.8
DDX	*0*	0.0	961.0	961.0
Missiles				
Standard	*87*	156.4	16.3	172.7
Tactical Tomahawk	*106*	145.8	94.3	240.1
Javelin	*1,725*	250.5	0.5	251.0
ATACMS Block II	*0*	49.7	190.3	240.0
AMRAAM	*261*	140.5	45.1	185.6
JASSM	*100*	54.2	57.0	111.2
JSOW	*476*	195.2	16.7	211.9
JDAM	*35,000*	764.9	65.3	830.2
Sensor Fuzed Weapon (SFW)	*298*	106.0	0.0	106.0
WCMD	*4,959*	71.2	0.0	71.2
Trident II	*12*	585.8	40.3	626.1
Other Weapons Systems				
AH-64D Longbow Apache	*74*	895.5	46.2	941.7
UH-60 Blackhawk*	*12*	180.2	99.1	279.3
MH-60S Multi-Mission Helo. Upgrade*	*15*	372.2	23.3	395.5
MH-60R		116.2	89.0	205.2
RAH-66 Comanche		0.0	910.2	910.2
Crusader		0.0	475.2	475.2
Global Hawk UAV	*3*	170.8	458.0	628.8
Predator UAV	*22*	154.1	3.8	157.9
Shadow UAV	*12*	100.7	46.6	147.3
Other UAVs		0.0	184.6	184.6

*Includes funding for advanced procurement.

Procurement figures do not include funding for initial spares or modifications.

Source: CSBA, February 2002. Based on DoD data.

Table 7

Department of Defense Personnel

(strength at end of fiscal year; in thousands)

	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	**FY 2003**
Active Duty														
Army	751	725	611	572	541	509	491	492	484	479	482	481	480	**480**
annual change		*(3.5%)*	*(15.7%)*	*(6.4%)*	*(5.4%)*	*(5.9%)*	*(3.5%)*	*0.2%*	*(1.6%)*	*(0.9%)*	*0.6%*	*(0.3%)*	*(0.2%)*	*0.0%*
change since FY 90		*(3.5%)*	*(18.6%)*	*(23.8%)*	*(28.0%)*	*(32.2%)*	*(34.6%)*	*(34.5%)*	*(35.6%)*	*(36.2%)*	*(35.8%)*	*(36.0%)*	*(36.1%)*	*(36.1%)*
Navy	583	571	542	510	469	435	417	396	382	373	373	378	376	**376**
annual change		*(2.1%)*	*(5.1%)*	*(5.9%)*	*(8.0%)*	*(7.2%)*	*(4.1%)*	*(5.0%)*	*(3.5%)*	*(2.4%)*	*0.1%*	*1.2%*	*(0.5%)*	*(0.1%)*
change since FY 90		*(2.1%)*	*(7.0%)*	*(12.5%)*	*(19.6%)*	*(25.4%)*	*(28.5%)*	*(32.1%)*	*(34.4%)*	*(36.0%)*	*(36.0%)*	*(35.2%)*	*(35.5%)*	*(35.6%)*
Marine Corps	197	195	185	178	174	175	175	174	173	173	173	173	173	**175**
annual change		*(1.0%)*	*(5.1%)*	*(3.8%)*	*(2.2%)*	*0.6%*	*0.0%*	*(0.6%)*	*(0.5%)*	*(0.3%)*	*0.4%*	*(0.2%)*	*(0.2%)*	*1.4%*
change since FY 90		*(1.0%)*	*(6.1%)*	*(9.6%)*	*(11.7%)*	*(11.2%)*	*(11.2%)*	*(11.7%)*	*(12.1%)*	*(12.4%)*	*(12.0%)*	*(12.2%)*	*(12.4%)*	*(11.2%)*
Air Force	539	511	470	444	426	400	389	377	368	361	356	354	359	**359**
annual change		*(5.2%)*	*(8.0%)*	*(5.5%)*	*(4.1%)*	*(6.1%)*	*(2.8%)*	*(3.1%)*	*(2.4%)*	*(2.0%)*	*(1.4%)*	*(0.6%)*	*1.5%*	*0.1%*
change since FY 90		*(5.2%)*	*(12.8%)*	*(17.6%)*	*(21.0%)*	*(25.8%)*	*(27.8%)*	*(30.1%)*	*(31.7%)*	*(33.1%)*	*(34.0%)*	*(34.4%)*	*(33.4%)*	*(33.4%)*
Total Active	2,070	2,002	1,808	1,704	1,610	1,519	1,472	1,439	1,407	1,386	1,384	1,385	1,387	**1,390**
annual change		*(3.3%)*	*(9.7%)*	*(5.8%)*	*(5.5%)*	*(5.7%)*	*(3.1%)*	*(2.2%)*	*(2.2%)*	*(1.5%)*	*(0.1%)*	*0.1%*	*0.2%*	*0.2%*
change since FY 90		*(3.3%)*	*(12.7%)*	*(17.7%)*	*(22.2%)*	*(26.6%)*	*(28.9%)*	*(30.5%)*	*(32.0%)*	*(33.1%)*	*(33.1%)*	*(33.1%)*	*(33.0%)*	*(32.9%)*
Selected Reserves														
Army	736	741	729	686	630	616	596	583	567	563	560	557	555	**555**
annual change		*0.7%*	*(1.6%)*	*(5.9%)*	*(8.2%)*	*(2.2%)*	*(3.2%)*	*(2.2%)*	*(2.7%)*	*(0.8%)*	*(0.5%)*	*(0.4%)*	*(0.4%)*	*0.0%*
change since FY 90		*0.7%*	*(1.0%)*	*(6.8%)*	*(14.4%)*	*(16.3%)*	*(19.0%)*	*(20.8%)*	*(22.9%)*	*(23.6%)*	*(23.9%)*	*(24.3%)*	*(24.6%)*	*(24.6%)*
Navy	149	151	142	132	108	101	98	95	93	89	87	88	86	**88**
annual change		*1.1%*	*(6.0%)*	*(7.0%)*	*(18.2%)*	*(6.5%)*	*(3.0%)*	*(2.7%)*	*(2.3%)*	*(4.3%)*	*(2.5%)*	*1.1%*	*(1.8%)*	*1.7%*
change since FY 90		*1.1%*	*(5.0%)*	*(11.6%)*	*(27.7%)*	*(32.4%)*	*(34.4%)*	*(36.2%)*	*(37.6%)*	*(40.3%)*	*(41.8%)*	*(41.2%)*	*(42.2%)*	*(41.2%)*
Marine Corps	45	44	42	42	41	40.9	42	42	41	40	40	40	40	**40**
annual change		*(1.1%)*	*(4.5%)*	*0.0%*	*(2.4%)*	*(0.2%)*	*2.9%*	*(0.2%)*	*(2.8%)*	*(2.2%)*	*(0.7%)*	*0.4%*	*(0.6%)*	*0.0%*
change since FY 90		*(1.1%)*	*(5.6%)*	*(5.6%)*	*(7.9%)*	*(8.1%)*	*(5.4%)*	*(5.6%)*	*(8.2%)*	*(10.2%)*	*(10.9%)*	*(10.5%)*	*(11.1%)*	*(11.1%)*
Air Force	201	202	201	198	193	188	184	182	180	177	179	183	183	**182**
annual change		*0.6%*	*(0.5%)*	*(1.5%)*	*(2.5%)*	*(2.5%)*	*(2.1%)*	*(1.2%)*	*(1.1%)*	*(1.4%)*	*0.7%*	*2.6%*	*(0.1%)*	*(0.5%)*
change since FY 90		*0.6%*	*0.1%*	*(1.4%)*	*(3.9%)*	*(6.3%)*	*(8.3%)*	*(9.4%)*	*(10.3%)*	*(11.6%)*	*(11.0%)*	*(8.7%)*	*(8.8%)*	*(9.3%)*
Total Selected Reserves	1,131	1,138	1,114	1,058	972	946	921	902	881	869	865	869	864	**865**
annual change		*0.6%*	*(2.1%)*	*(5.0%)*	*(8.1%)*	*(2.6%)*	*(2.7%)*	*(2.0%)*	*(2.3%)*	*(1.4%)*	*(0.5%)*	*0.4%*	*(0.5%)*	*0.1%*
change since FY 90		*0.6%*	*(1.5%)*	*(6.5%)*	*(14.1%)*	*(16.3%)*	*(18.6%)*	*(20.2%)*	*(22.0%)*	*(23.1%)*	*(23.5%)*	*(23.2%)*	*(23.6%)*	*(23.5%)*

Source: CSBA, February 2002. Based on DoD data.

Table 8

Department of Defense Budget by Service

(budget authority in billions of dollars)

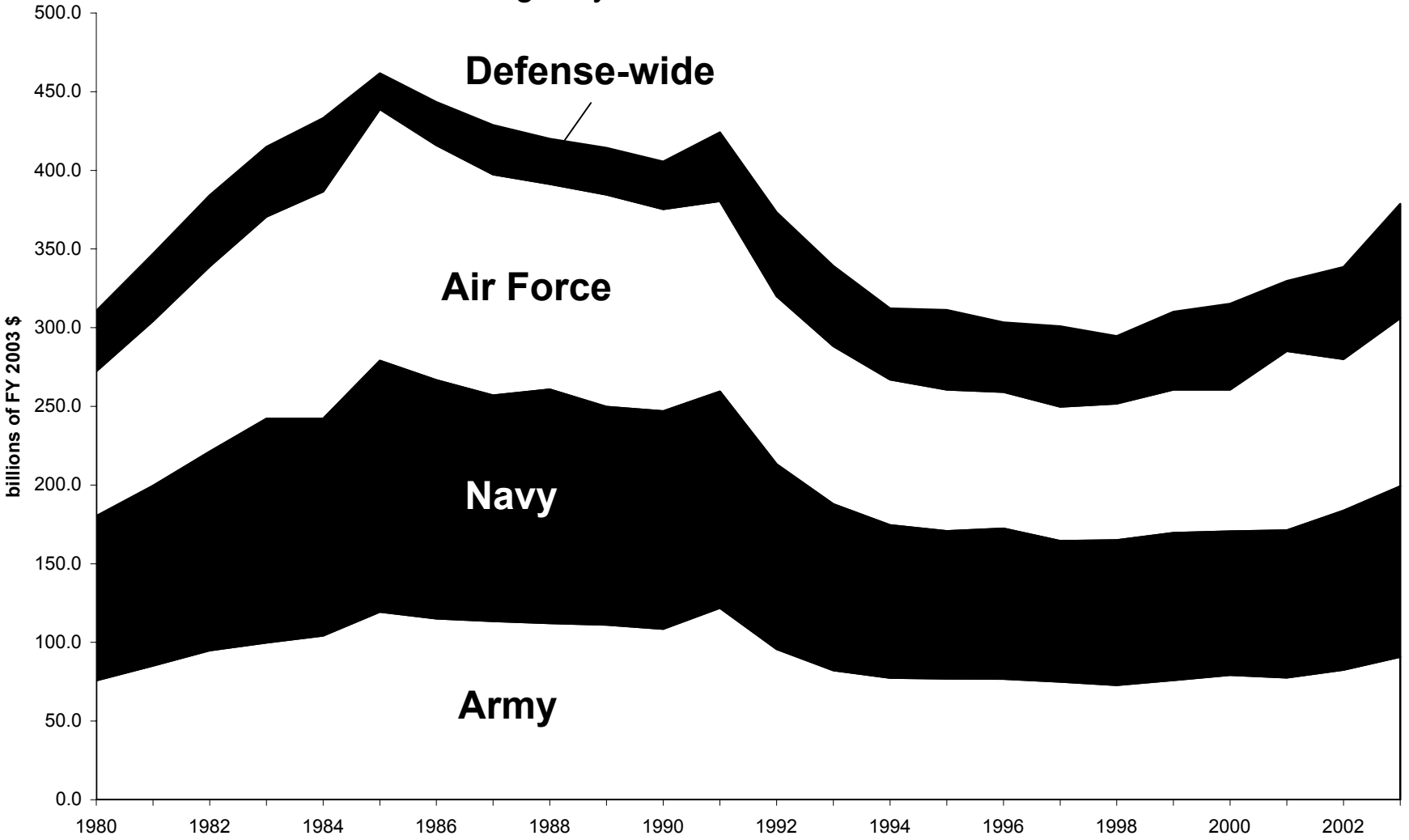
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	**2003**
Army																								
Current $	34.4	43.3	52.3	57.5	62.2	74.3	73.1	74.0	75.8	78.1	78.5	91.8	73.6	64.8	62.5	63.3	64.5	64.4	64.4	68.4	73.2	73.7	80.9	**90.9**
FY 2003$	75.9	85.2	94.9	99.9	104.3	119.6	115.2	113.5	112.2	111.2	108.6	121.9	95.7	82.3	77.6	77.0	76.9	75.1	73.0	76.1	79.4	77.6	82.7	**90.9**
% of total	*24%*	*25%*	*25%*	*24%*	*24%*	*26%*	*26%*	*26%*	*27%*	*27%*	*27%*	*29%*	*26%*	*24%*	*25%*	*25%*	*25%*	*25%*	*25%*	*25%*	*25%*	*24%*	*24%*	*24%*
Navy																								
Current $	47.2	58.0	69.6	81.9	82.1	99.0	96.1	93.5	100.3	97.3	100.0	103.5	90.3	83.2	78.1	76.9	80.1	76.6	80.7	84.0	84	88.8	98.8	**108.3**
FY 2003$	104.3	114.3	126.4	142.1	137.8	159.4	151.4	143.4	148.4	138.5	138.3	137.4	117.4	105.6	96.9	93.7	95.5	89.3	91.9	93.5	91.2	93.5	101.0	**108.3**
% of total	*34%*	*33%*	*33%*	*34%*	*32%*	*35%*	*34%*	*33%*	*35%*	*33%*	*34%*	*32%*	*31%*	*31%*	*31%*	*30%*	*31%*	*30%*	*31%*	*30%*	*29%*	*28%*	*30%*	*29%*
Air Force																								
Current $	41.7	53.1	64.8	74.1	86.1	99.4	94.9	91.6	88.3	94.7	92.9	91.3	82.3	79.1	74.6	73.9	73.0	73.2	76.3	81.9	83.1	108.3	94.3	**107.0**
FY 2003$	92.2	104.7	117.7	128.6	144.5	160.0	149.5	140.6	130.7	134.9	128.5	121.2	107.0	100.5	92.6	90.0	87.0	85.4	86.9	91.1	90.1	114.1	96.4	**107.0**
% of total	*30%*	*30%*	*31%*	*31%*	*33%*	*35%*	*34%*	*33%*	*31%*	*33%*	*32%*	*29%*	*29%*	*30%*	*30%*	*29%*	*29%*	*28%*	*30%*	*29%*	*29%*	*35%*	*28%*	*28%*
Defense-wide																								
Current $	17.3	21.7	24.9	25.4	27.8	14.1	17.3	20.4	19.3	20.8	21.7	32.8	40.8	40.0	36.3	41.6	36.9	40.8	34.4	44.3	41.9	42.14	57.2	**72.42**
FY 2003$	38.3	42.8	45.2	44.2	46.6	22.7	27.3	31.2	28.6	29.6	30.1	43.6	53.1	50.8	45.0	50.6	44.0	51.1	42.8	49.3	54.5	44.4	58.5	**72.42**
% of total	*12%*	*12%*	*12%*	*11%*	*11%*	*5%*	*6%*	*7%*	*7%*	*7%*	*7%*	*10%*	*14%*	*15%*	*14%*	*16%*	*15%*	*17%*	*15%*	*16%*	*17%*	*13%*	*17%*	*19%*

Source: CSBA, February 2002. Based on DoD data.

* *Includes* funding for Desert Shield/Desert Storm; *excludes* allied Gulf War contributions..

Graph 2

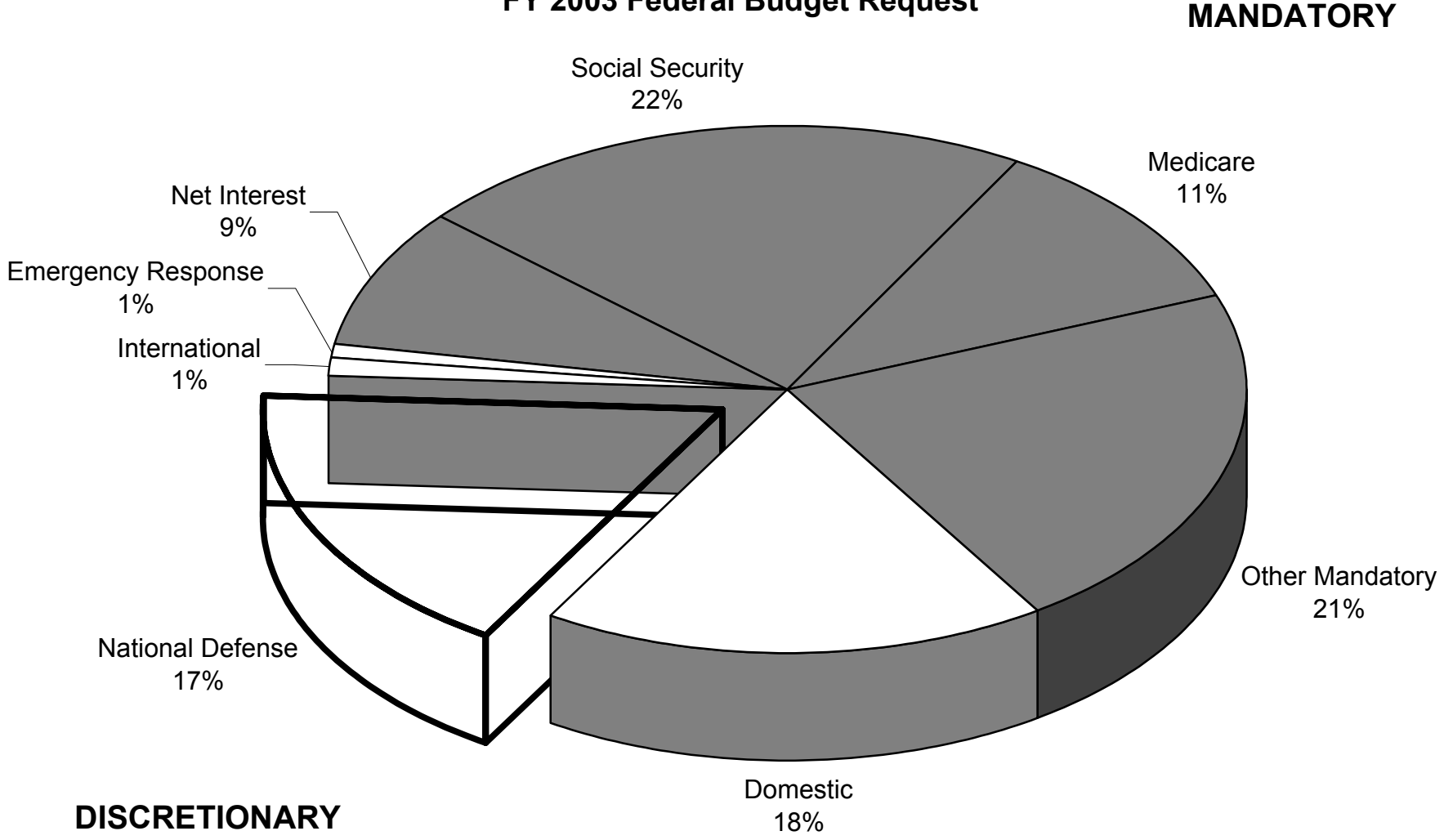
DoD Budget by Service FY 1980-FY 2003 *



Source: CSBA, February 2002. Based on DoD data.

* *Includes* Desert Shield/Storm funding; *excludes* allied Gulf War contributions.

Graph 3
FY 2003 Federal Budget Request



Source: CSBA, February 2002. Based on OMB outlay data.

Table 9

National Defense, Federal Spending and the Gross Domestic Product*

FY 1980-FY 2007

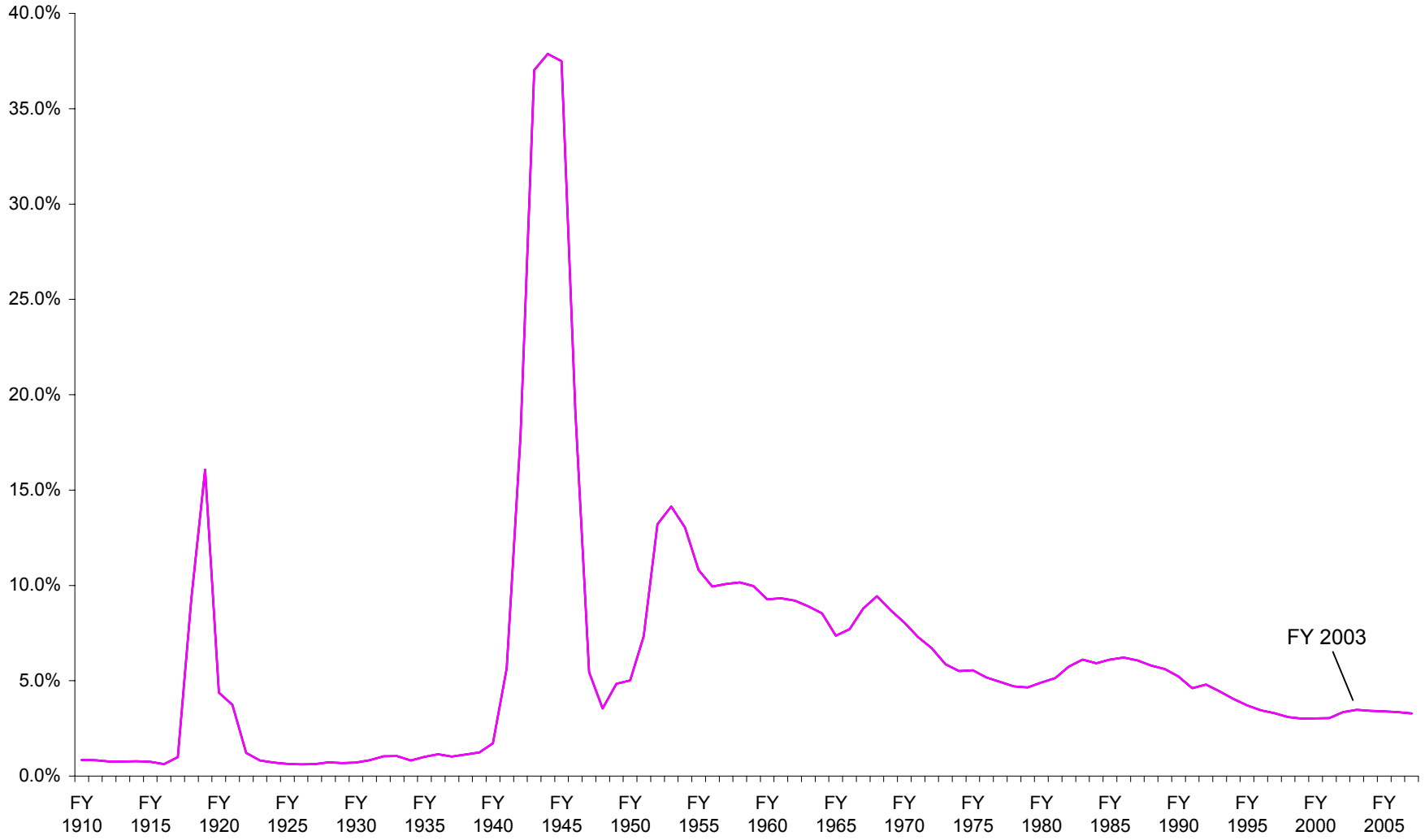
(outlays in billions of current dollars)

Fiscal Year	National Defense Outlays (050)	Federal Outlays	050 as % of Federal Outlays	GDP	050 as % of GDP
1980	134.0	590.9	22.7%	2,732.1	4.9%
1981	157.5	678.2	23.2%	3,061.6	5.1%
1982	185.3	745.8	24.8%	3,228.6	5.7%
1983	209.9	808.4	26.0%	3,440.5	6.1%
1984	227.4	851.9	26.7%	3,839.4	5.9%
1985	252.7	946.4	26.7%	4,136.6	6.1%
1986	273.4	990.5	27.6%	4,401.4	6.2%
1987	282.0	1,004.1	28.1%	4,647.0	6.1%
1988	290.4	1,064.5	27.3%	5,014.7	5.8%
1989	303.6	1,143.7	26.5%	5,405.5	5.6%
1990	299.3	1,253.2	23.9%	5,735.6	5.2%
1991	273.3	1,324.4	20.6%	5,930.4	4.6%
1992	298.4	1,381.7	21.6%	6,218.6	4.8%
1993	291.1	1,409.4	20.7%	6,558.4	4.4%
1994	281.6	1,461.7	19.3%	6,944.6	4.1%
1995	272.1	1,515.7	17.9%	7,324.0	3.7%
1996	265.8	1,560.5	17.0%	7,694.6	3.5%
1997	270.5	1,601.2	16.9%	8,185.2	3.3%
1998	268.5	1,652.6	16.2%	8,663.9	3.1%
1999	274.9	1,701.9	16.2%	9,124.3	3.0%
2000	294.5	1,788.8	16.5%	9,744.3	3.0%
2001	308.5	1,863.9	16.6%	10,150.5	3.0%
2002	348.0	2,052.3	17.0%	10,361.6	3.4%
2003	**379.0**	**2,128.2**	**17.8%**	**10,922.3**	**3.5%**
2004	393.8	2,189.1	18.0%	11,525.8	3.4%
2005	413.5	2,276.9	18.2%	12,158.9	3.4%
2006	428.5	2,369.1	18.1%	12,803.3	3.3%
2007	442.5	2,467.7	17.9%	13,448.0	3.3%

Source: CSBA, February 2002. Based on OMB data.

* National defense estimates *include* outlays for Desert Shield/Storm and allied Gulf War cash contributions.

Graph 4
National Defense Outlays as a Share of GDP



Source: CSBA, February 2002. FY 1934-07 based on DoD and OMB data. FY 1910-1933 based on CRS and OMB data. FY 1910-29 figures are for defense as a share of GNP.

SOURCES AND METHODOLOGY

Unless otherwise noted, current dollar estimates are taken from the Office of Management and Budget (OMB) *Budget of the United States Government, Historical Tables (2002)*. Constant dollar estimates are derived using DoD deflator tables dated February 2002. Figures for FY 2001 and prior years are actual, FY 2002 figures are estimated, and FY 2003-2007 figures are proposed.

Operation Desert Shield/Desert Storm

Unless otherwise noted, defense budget authority (BA) and outlay (OL) figures used in the preceding tables and graphs *exclude* the costs associated with and the allied contributions to Operation Desert Shield/Desert Storm. This methodology better reflects actual defense spending trends since allied contributions covered most of the Gulf War's costs.

Tables 4 and 5:

Current dollars estimates for FY 1980-1995 are from DoD, *National Defense Budget Estimates for FY 2001* (July 2001). Estimates for FY 1996-2003 are from OMB, *Budget of the United States Government, Historical Tables* (2002).

Table 6:

Data is from DoD, Program Acquisition Costs by Weapon System (February 2002).

Table 8:

Troop strength figures for FY 1990-2000 are taken from DoD, *National Defense Budget Estimates for FY 2002* (July 2001). Figures for FY 2001-2003 are from OMB, *Budget of the United States Government, Appendix* (2002).

Table 9 and Graph 2:

Service budget figures for FY 1980-2000 are from DoD, *National Defense Budget Estimates for FY 2002* (July 2001). Figures for FY 2001-2003 are from DoD, "FY 2003 Defense Budget," briefing slides (February 4, 2002), "The Army Budget Fiscal Year 2003," (February 4, 2002), *Highlights of the Department of the Navy FY 2003 Budget,* (February 2002), and OMB, *Budget of the United States Government, Appendix* (2002).

Table 10 and Graph 4:

Data is from OMB, *Budget of the United States* (2002), except as noted: FY 1934-07 figures are based on DoD and OMB data, and FY 1910-1933 figures are based on CRS and OMB data.