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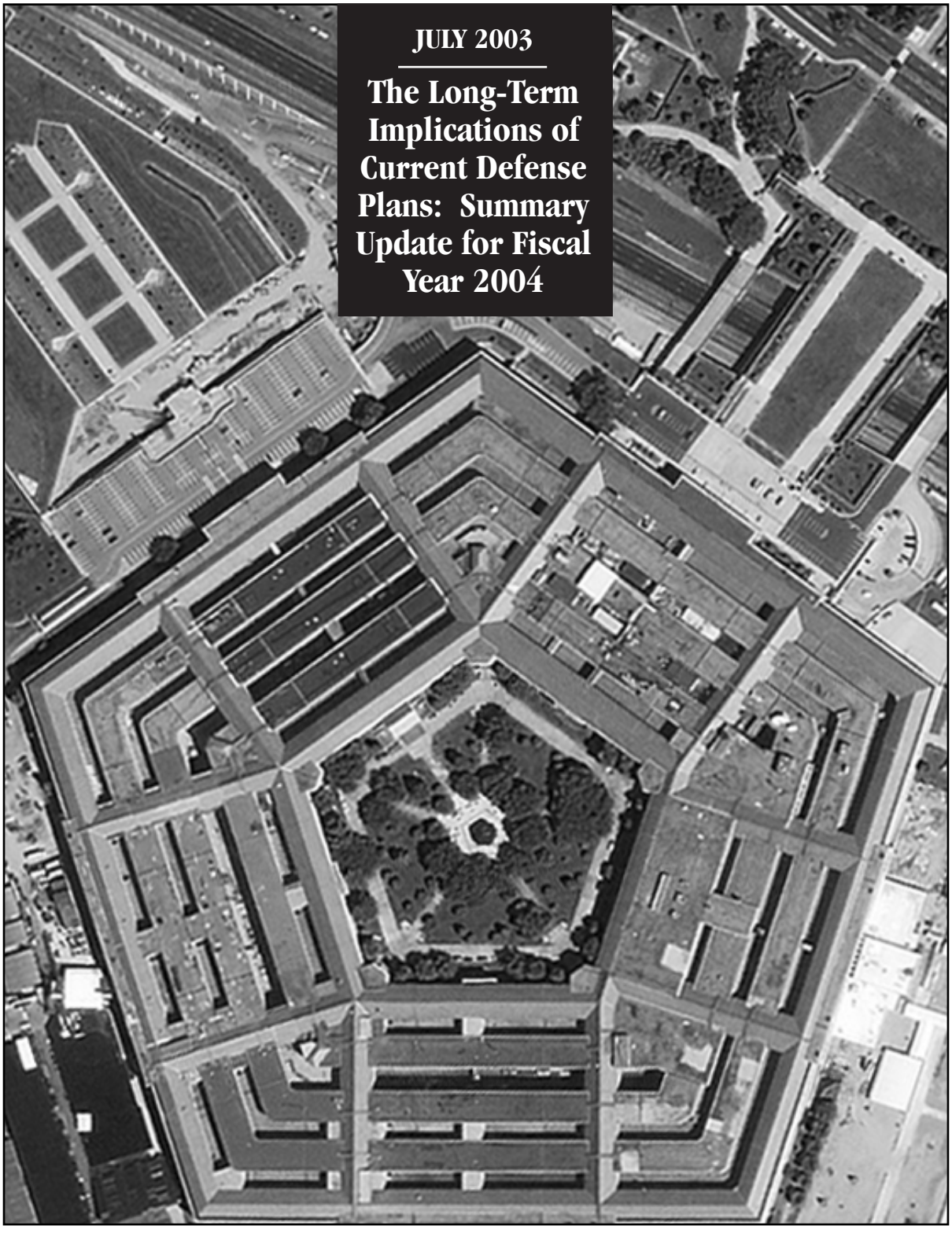

JULY 2003

# The Long-Term Implications of Current Defense Plans: Summary Update for Fiscal Year 2004

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The Congress of the United States ■ Congressional Budget Office

# Notes

Unless otherwise indicated, all years referred to in this paper are fiscal years, and all dollar amounts are expressed in 2004 dollars of total obligational authority.

Most of the methodology used for this update is the same one that the Congressional Budget Office used for its January 2003 study *The Long-Term Implications of Current Defense Plans*. Please refer to that study—which is available at CBO's Web site, www.cbo.gov—for a more detailed description of the analysis.

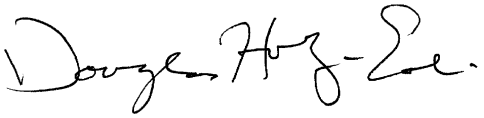
The projections in this paper deal with resources for the Department of Defense (subfunction 051 of the federal budget) rather than for all national defense activities (function 050).

# Preface

What level of resources might be needed in the long term to execute the Bush Administration's current plans for defense? This Congressional Budget Office (CBO) paper—prepared at the request of the Chairman of the Senate Budget Committee—addresses that question. It updates the resource projections contained in CBO's January 2003 study *The Long-Term Implications of Current Defense Plans* to reflect the changes that the Administration made to those plans in preparing the President's budgetary proposals for fiscal year 2004. (CBO expects to publish a longer report later this year that will update not only the projections of resources in the January 2003 study but also the projections of the age and composition of future U.S. military forces.) In keeping with CBO's mandate to provide impartial analysis, this paper makes no recommendations.

Adam Talaber of CBO's National Security Division coordinated the preparation of this paper under the supervision of J. Michael Gilmore. David Arthur, Eric J. Labs, Allison Percy, Lane Pierrot, Paul Rehmus, and Robie Samanta Roy of the National Security Division contributed to the analysis. Kent Christensen, Raymond Hall, David Newman, Sam Papenfuss, Michelle Patterson, and Matthew Schmit of CBO's Defense, International Affairs, and Veterans' Affairs Cost Estimates Unit also contributed to the analysis under the supervision of Jo Ann Vines. Ian MacLeod, formerly of CBO, provided assistance in preparing for this update.

Christian Spoor edited the paper, and Leah Mazade proofread it. Cindy Cleveland produced drafts of the manuscript, Lenny Skutnik produced the printed copies, and Annette Kalicki prepared the electronic versions for CBO's Web site (www.cbo.gov).



Douglas Holtz-Eakin
Director

July 2003

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## Summary and Introduction

Decisions about national defense that are made today can have long-lasting effects on the composition of U.S. armed forces and on the budgetary resources needed to support them. For example, programs to develop weapon systems often last a decade or more before the systems are fielded, and policy decisions about such matters as military pay and benefits can have long-term implications. In January 2003, the Congressional Budget Office (CBO) published a study called *The Long-Term Implications of Current Defense Plans* in which it projected the resources that might be needed each year through 2020 to carry out the defense plans contained in the Bush Administration's 2003 Future Years Defense Program (FYDP).[1] Since then, the Department of Defense (DoD) has prepared a new FYDP reflecting changes that have been made to the department's programs and priorities in the past year. This paper updates CBO's January 2003 long-term projections to be consistent with the plans contained in the 2004 FYDP.

Overall, CBO's current and previous projections tell a similar story: carrying out today's plans for defense would require annual funding to stay at higher levels over the long term than defense spending has reached at any time since 1980, even when the effects of inflation are removed *(see Figure 1)*. That continuing demand for high levels of defense resources comes from three sources:

- Plans to rapidly increase purchases of new military equipment in the near term, following the decline in such purchases that occurred during the 1990s after the Cold War ended;
- Plans to develop and eventually produce systems that will provide new capabilities, as part of the push for "military transformation"; and
- The increasing cost of providing pay and benefits to DoD's military and civilian personnel.

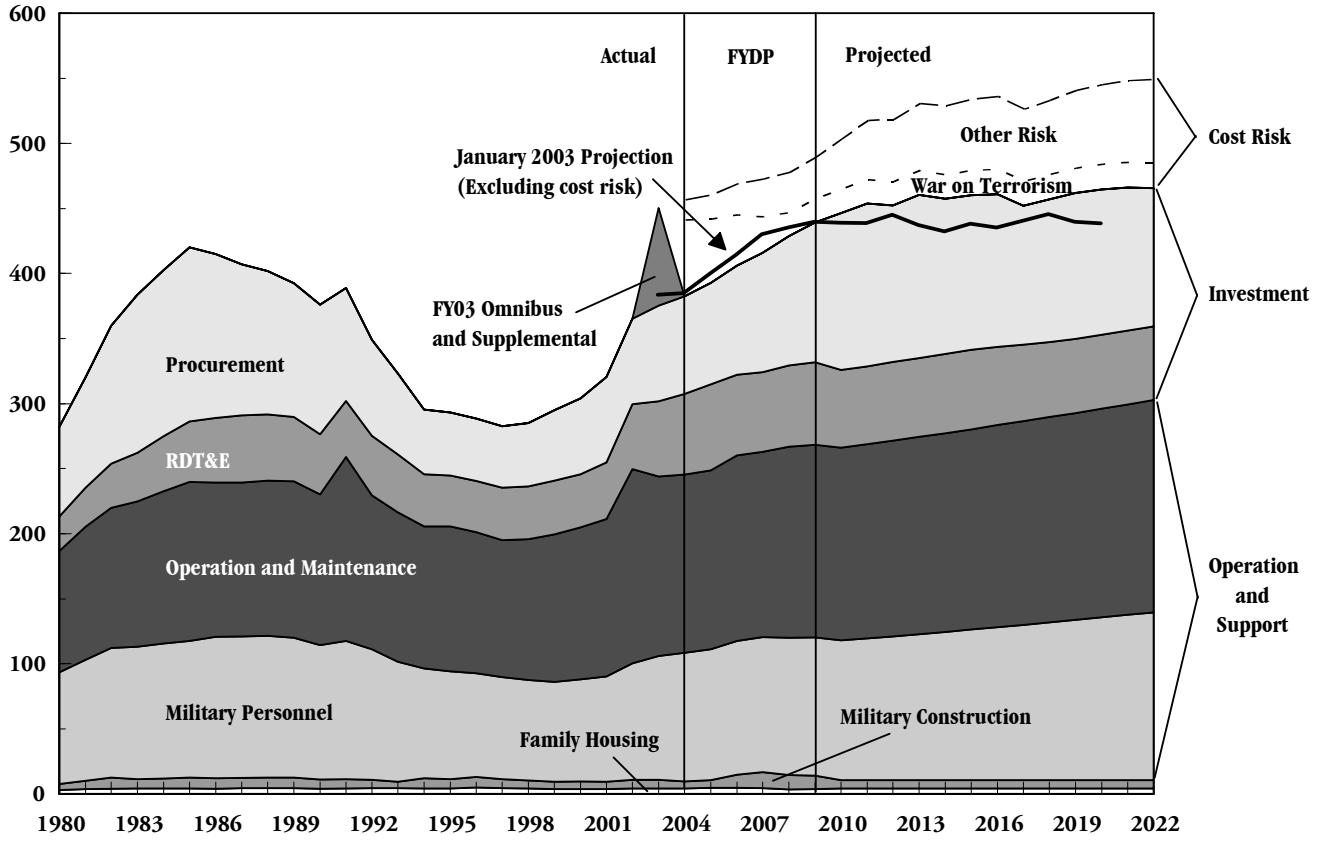
The average annual costs in CBO's updated projections (excluding cost risk, which is discussed below) exceed the annual costs in its previous projections by an average of $19 billion over the 2010-2020 period. That increase largely results from higher projected costs for some major weapons programs. It occurs despite the long-term savings from changes that DoD made in developing the 2004 FYDP—changes such as reducing purchases of the F-22 fighter, the Comanche attack helicopter, and the Joint Strike Fighter and retiring certain Navy ships.

1. The annual FYDP is produced by the Department of Defense and submitted to the Congress as part of the President's budget request. It is a database containing a historical record of defense forces and spending as well as DoD's plans for future programs and priorities. The historical part of the database shows costs, forces, and personnel levels since 1962. The plan part of the FYDP presents DoD's program budgets (estimates of future funding needs based on the department's current plans for all of its programs). The plan portion of the 2003 FYDP covers 2003 through 2007; the corresponding portion of the 2004 FYDP covers 2004 through 2009. For the years common to both plans (2004 through 2007), the 2004 FYDP anticipates a total of $29 billion less funding than the 2003 FYDP does. That reduction occurs in part because DoD's current plans exclude the $10 billion annual emergency response fund contained in the 2003 FYDP.

**Figure 1.**

## Past and Projected Resources for Defense

(Billions of 2004 dollars)




Source: Congressional Budget Office.

Note: FYDP = Future Years Defense Program; RDT&E = research, development, test, and evaluation; FY03 Omnibus and Supplemental = funding provided for fiscal year 2003 in the Consolidated Appropriations Resolution (Public Law 108-7) and the Emergency Wartime Supplemental Appropriations Act (P.L. 108-11).

In 2003, total obligational authority for DoD amounts to $450 billion (in 2004 dollars), including $65 billion in supplemental funding, primarily for the war in Iraq, and $10 billion that the Congress appropriated in the 2003 Consolidated Appropriations Resolution.[2] The 2004 FYDP anticipates that defense resources (excluding supplemental appropriations) will rise from $383 billion next year to $439 billion in 2009. If the program in that FYDP was carried out as currently envisioned, the demand for defense resources would continue to increase through 2022, CBO projects, averaging $458 billion a year between 2010 and 2022. Costs for day-to-day operation and support—running units, maintaining equipment, and providing pay and benefits (including medical care) to military personnel—as well as costs for military construction and family housing would grow from a total of $246 billion in 2004 to $303 billion in 2022. Demands for investment resources—mainly to develop and purchase new equipment—would increase from $137

2. Total obligational authority is composed almost exclusively of appropriations provided by the Congress.

billion in 2004 to a peak of $186 billion in 2013 and then decline to $163 billion by 2022.

Those projections are founded on DoD's current cost estimates for its planned programs and activities, where available. They exclude costs for continuing operations in Afghanistan and Iraq and for other activities conducted as part of the global war on terrorism. (DoD does not expect spending for such contingencies to be unneccessary during that planning period; rather, it expects to request funding for them using annual emergency supplemental appropriations, as needed.)

In an alternative case, CBO projected long-term demands under the assumption that costs for weapons programs and certain other activities grow as they have historically. Those cost-risk projections also assume that the U.S. military continues to take an active role overseas like the one that resulted in the current engagements in Afghanistan and Iraq and the global war on terrorism. In this alternative case, executing current defense plans could cost an average of $472 billion a year through 2009 and an average of $533 billion a year between 2010 and 2022.

Although future demands for defense resources could exceed peak spending during the 1980s in dollar terms, those demands could be lower than past spending in relation to the size of the economy. The share of U.S. gross domestic product (GDP) dedicated to defense spending declined from an annual average of 6 percent in the 1980s to 4 percent in the 1990s. If current defense plans were implemented, defense spending would drop to 3.3 percent of GDP by 2009 and to 2.5 percent by 2022—assuming that GDP grew at the long-term rates projected by CBO. With cost risk included, defense spending might equal 3.0 percent of GDP in 2022.

Defense spending could also fall as a share of the federal budget over the long term. It averaged 28 percent of the budget in the 1980s, dropping to 16 percent in 1998. Although that share rose to about 19 percent recently, in CBO's updated projections defense spending constitutes a steadily smaller portion of the budget over the long term. If the rest of the federal budget continued to grow in real (inflation-adjusted) terms through 2022 at the rate that CBO now projects, defense spending would fall to about 15 percent of the total budget by 2022 (or to 17 percent with cost risk) as the growth of mandatory programs such as Social Security, Medicare, and Medicaid outpaced projected increases for the military.[3]

## Projections of Spending for Operation and Support, Family Housing, and Military Construction

The 2004 FYDP envisions that spending for operation and support (O&S), which pays for DoD's day-to-day operations, will rise from $236 billion next year to $254 billion in 2009 (in 2004 dollars). In CBO's updated projections of the long-term costs of current plans, O&S spending would reach $292 billion by 2022. In CBO's projections with cost risk, O&S spending would reach $344 billion by 2022 *(see Figure 2)*. Appropriations for military family housing and military construction (which are shown in Figure 1) are projected to be the same in 2022 as in 2003—$11 billion—so those categories do not contribute to projected growth over that period.

The updated estimates for O&S spending do not differ greatly from the estimates in CBO's January 2003 study. That analysis projected that O&S spending (excluding cost risk) would rise by $28 billion between 2007 and 2020; in the updated analysis, the figure for that period is $33 billion.

### Projections for O&S, Military Construction, and Family Housing

In CBO's projections without cost risk, virtually all of the growth in O&S spending results from personnel-related increases—the growing cost of medical benefits and rising real wages.

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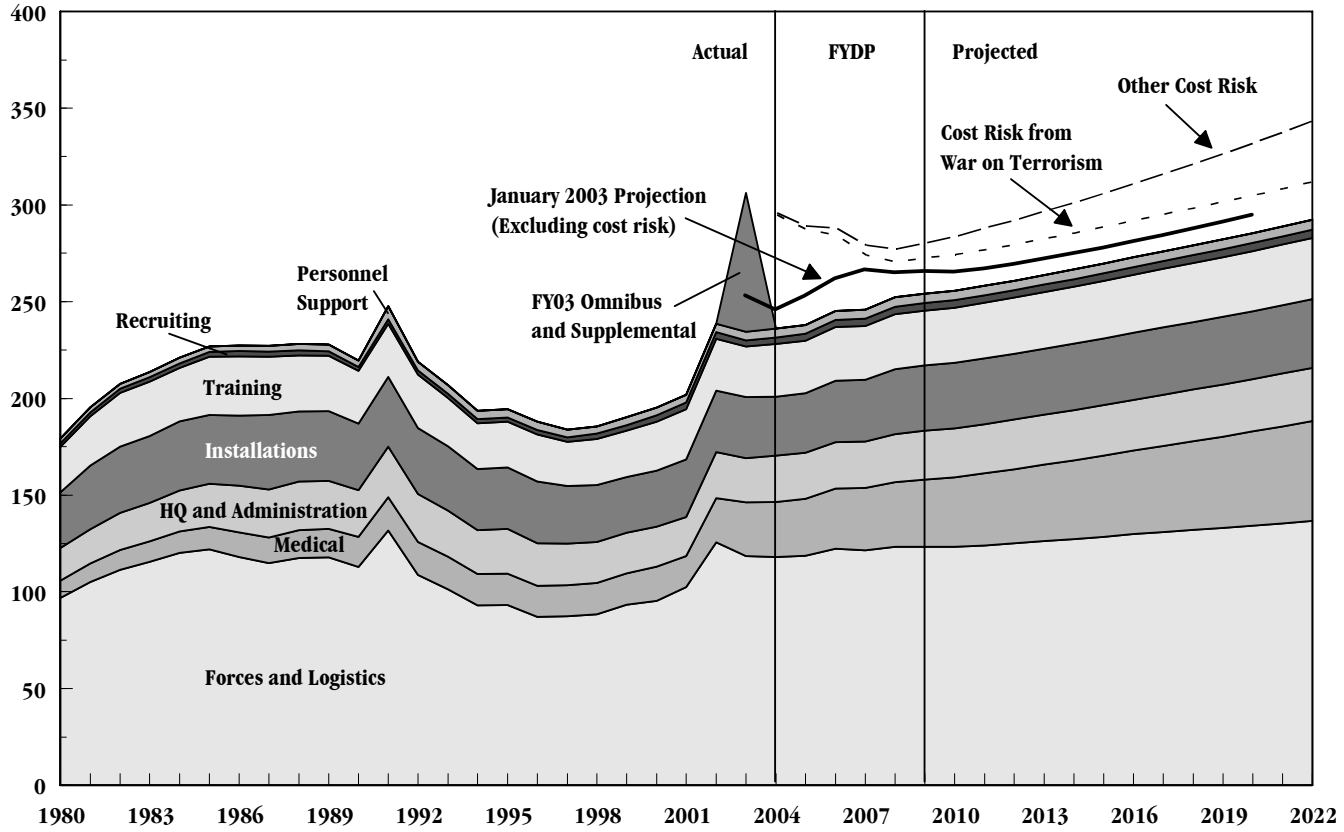
3. That estimate is based on an extrapolation from CBO's most recent 10-year projections for the federal budget, which were published in Congressional Budget Office, *An Analysis of the President's Budgetary Proposals for Fiscal Year 2004* (March 2003).

**Figure 2.**

## Past and Projected Resources for Operation and Support

(Billions of 2004 dollars)




Source: Congressional Budget Office.

Note: FYDP = Future Years Defense Program; HQ = headquarters; FY03 Omnibus and Supplemental = funding provided for fiscal year 2003 in the Consolidated Appropriations Resolution (Public Law 108-7) and the Emergency Wartime Supplemental Appropriations Act (P.L. 108-11). CBO estimates that the majority of that additional funding for 2003 will be used to fund forces and logistics.

CBO projects that under current plans, DoD's spending on medical care (including accrual payments for the medical benefits of military retirees over age 65) would almost double over the next two decades, rising from $28 billion in 2004 to $35 billion in 2009 and $52 billion in 2022. By the end of that period, DoD would be spending 73 cents on medical benefits for each dollar it spent on cash compensation for its personnel, compared with 55 cents today. Those estimates assume that no legislated increases in medical benefits occur but that medical costs for retirees grow at the 6.25 percent (nominal) annual rate assumed by DoD's actuaries. The estimates also assume that medical costs for other DoD beneficiaries grow at the rate that CBO and the Centers for Medicare and Medicaid Services now project for per capita medical spending in the U.S. economy as a whole.

DoD plans to increase pay for military personnel at a rate slightly faster than the growth of the employment cost index (a measure of pay in the civilian economy) over the next three years and at the same rate as the growth of that index thereafter.[4] CBO projects persistent increases in the

4. Specifically, the department plans to fund military pay raises for 2004 through 2006 at a rate equal to the projected change in the employment cost index for the economy as a whole plus 0.5 percentage points and to fund raises after 2006 at a rate equal to the annual change in that index.

employment cost index, such that DoD's current plans, if continued, would result in a roughly 30 percent real rise in military pay between 2004 and 2022. CBO also assumes that pay for DoD's civilian personnel will grow at the same rate as the employment cost index.[5] Those increases in military and civilian pay account for all of the long-term growth in several subcategories of O&S costs: forces and logistics, headquarters and administration, installations, and training.

The Administration's current plans include funding for a round of base realignments and closures (BRAC) in 2005 as well as for military construction unrelated to the BRAC round and for the operation and construction of military family housing. The costs of those activities vary over time. Nonetheless, CBO projects that costs for military construction and family housing will be the same in 2022 as they are today, in part because it assumes that any increases in costs would be offset by savings if DoD succeeded in its plans to close or realign bases and to privatize family housing. Adjusted for inflation, the $11 billion figure that CBO is now projecting for those activities is roughly equal to the figure in the January 2003 projections.

DoD's projections for the 2004 FYDP included a total of approximately $11 billion for the 2005 BRAC round. Judging from the historical ratio of BRAC costs to resulting savings, a 2005 BRAC round with $11 billion in up-front costs could eventually produce net savings of $3 billion a year. In CBO's projection, those savings offset funding increases that would otherwise be required for military construction and real property maintenance. However, because the Administration is planning less funding for the 2005 BRAC round than CBO envisioned earlier, CBO's estimate of long-term annual savings is about $2 billion lower now than in the January 2002 projection.[6]

## Cost Risk for O&S, Military Construction, and Family Housing

In its cost-risk projection, CBO analyzed the potential effects of changes in a number of the key assumptions incorporated in the 2004 FYDP. If those changes occurred, spending for O&S, military construction, and family housing would be $52 billion higher in 2022 than in CBO's projection without cost risk. That addition would bring total spending on those activities to $344 billion in 2022—46 percent above next year's level, compared with 24 percent without cost risk.

Like the 2004 FYDP, CBO's projection assumes that new generations of weapon systems are no more expensive to operate and maintain than the systems they replace. Thus, one source of cost risk is that new weapon systems that cost more to buy could also cost more to operate and maintain than older generations of equipment—as has often been the case in the past. In addition, the aging of existing weapon systems could increase operation and maintenance costs. In the case of ground forces, the long-term trend of rising operation and maintenance spending per active-duty service member could continue. Those risks could add $14 billion to the annual cost of the Administration's current plans by 2022, CBO estimates, about the same figure as in the January 2003 projection.

Neither the 2004 FYDP nor CBO's projection of O&S spending without cost risk includes funding for ongoing operations in Iraq and Afghanistan or for other military operations against terrorism. (The Administration plans to request annual supplemental appropriations to fund those activities, as necessary.) In its cost-risk projection,

5. The Administration plans to make work that is now done by 217,000 DoD civilians subject to competition between public and private providers. However, the 2004 FYDP does not appear to incorporate savings from that plan. Therefore, if the plan resulted in savings, the growth of pay costs might be less than CBO projects. Specifically, if DoD implemented that plan by opening civilian positions to competition at the rate that it has in the past, and if future savings reflected past experience, reductions in annual spending would equal roughly $3 billion by 2022, CBO estimates.

6. The BRAC commission could recommend a larger round of base realignments and closures than the one funded in the 2004 FYDP. Defense Secretary Donald Rumsfeld has suggested a new BRAC round as large as all previous rounds combined, and some DoD planners envision a round that would be three times the average size of the last two rounds. CBO estimates that such a large BRAC round could result in an additional $3 billion in annual savings over the long run but would also require an extra $16 billion in up-front funding.

CBO assumes that those activities could cost as much as $59 billion next year. That figure is based on the assumption that maintaining an occupation force of 200,000 troops in Iraq and Kuwait would cost $3.8 billion per month.[7] In addition, budgetary information provided by DoD indicates that ongoing operations in Afghanistan and other activities associated with the global war on terrorism could cost about $1.1 billion per month. (Those costs have been converted to 2004 dollars.)

Over the longer term, CBO projects that the cost risk associated with those (or similar) activities could amount to about $20 billion annually. That estimate is based on the assumptions that between 2005 and 2008, U.S. forces in Iraq are reduced to 50,000 troops, that the intensity of operations in Afghanistan drops to the level of those now going on in Bosnia and Kosovo, and that other activities conducted as part of the war on terrorism continue indefinitely at their current funding level.[8] Of course, those specific assumptions are unlikely to hold true through 2022, the last year of CBO's projection. The $20 billion estimate is simply a proxy for the cost impact of continued engagement by the U.S. military in such operations abroad. If U.S. foreign policy shifted in a way that increased or decreased the nation's military presence overseas, costs could change as well.

Another risk is that personnel support costs, which include many high-priority quality-of-life initiatives, will continue the upward trend seen in recent years rather than remain at the level projected for the end of the FYDP period. As in CBO's previous projection, that risk could add $1 billion a year to the long-term cost of the Administration's current plans.

In addition, there is the risk that DoD's medical costs could increase more rapidly than assumed in CBO's projection, in part because of changes in such things as technology, medical standards, and prices for health care. In particular, the future growth rate of per capita medical spending in the U.S. economy as a whole—on which CBO's projection is based—is uncertain. If that rate turned out to be 30 percent higher than CBO assumed, DoD's medical costs would be about $13 billion more in 2022 than in the projection without cost risk.[9]

Finally, the possibility exists that the 2005 BRAC round might not occur. That change would save DoD a total of $11 billion between 2005 and 2012 from not implementing the round. Over the longer term, however, DoD would lose the yearly savings of about $3 billion that it would have received after those up-front costs had been paid.

## Projections of Spending for Investment

The 2004 FYDP envisions that spending for investment —which pays for developing, testing, and buying weapon systems and other equipment—will rise from $137 billion next year to $171 billion in 2009 (in 2004 dollars). In CBO's updated projection of the long-term costs of current plans, investment spending peaks at $186 billion in 2013. In the projection with cost risk, investment spending reaches $223 billion in 2013.

### Army Investment

Between the 2003 and 2004 versions of the FYDP, investment resources allocated to the Department of the Army declined by an average of about $4 billion a year for the period from 2004 to 2009.[10] Much of that decline sprang from decisions to:

- Delay production of the Comanche reconnaissance helicopter from 2005 to 2007 and cut the number to be produced;

7. See Congressional Budget Office, *Estimated Costs of a Potential Conflict with Iraq* (September 2002).

8. By comparison, CBO's January 2003 long-term projection included $10 billion a year for an emergency response fund to cover expenses such as those related to Afghanistan and the war on terrorism.

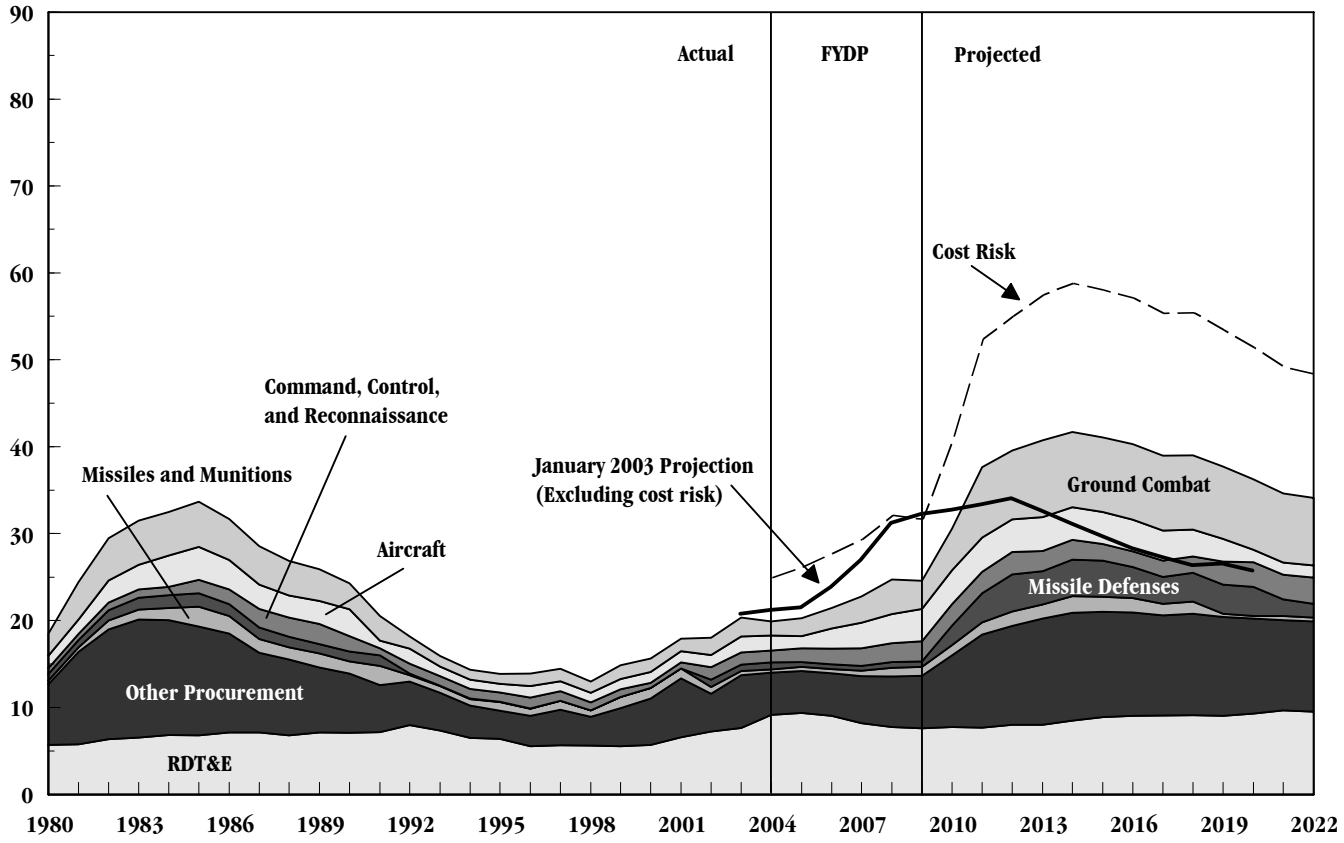
9. Alternatively, medical costs might be $10 billion lower in 2022 than in CBO's projection without cost risk if growth in those costs eased by 30 percent over the longer term. See Congressional Budget Office, *Past and Projected Growth in the Department of Defense's Medical Spending* (forthcoming).

10. Because the 2003 FYDP extends only through 2007, that comparison includes CBO's January 2003 projection of the cost of the plans contained in that FYDP in 2008 and 2009.

**Figure 3.**

## Past and Projected Army Resources for Investment

(Billions of 2004 dollars)




Source: Congressional Budget Office.

Note: FYDP = Future Years Defense Program; RDT&E = research, development, test, and evaluation.

- Substantially scale back planned upgrade programs for the Army's current fleet of ground combat equipment (including Abrams tanks and Bradley fighting vehicles);

- Delay the start of procurement of the Future Combat System (FCS), which is intended to replace current ground combat equipment; and

- Transfer funding for the destruction of chemical munitions out of the Army's budget.

Despite that decline in the near term, CBO's updated projection of the Army's demands for investment resources beyond 2010 is substantially higher than the previous projection—averaging $38 billion a year without cost risk, compared with $30 billion a year in the January 2003 projection.[11] Adjusted for past rates of cost growth, Army investment costs could average as much as $53 billion a year after 2010 *(see Figure 3)*. The increase from the previous projection occurs in spite of the long-term effects of the program cuts listed above for one main reason: the Army's estimate of the cost to equip a brigade

11. In CBO's analysis, the Army's procurement account includes procurement funds for missile defense programs such as the Patriot PAC-3, the Medium Extended Air Defense System, the Mobile Tactical High-Energy Laser, the Theater High Altitude Area Defense, and the ground-based midcourse missile defense system. Research for those programs is funded by the Missile Defense Agency, but DoD currently plans to transfer the funding for those systems to the services when the systems enter production.

with the capabilities of the FCS has more than doubled (from $1.9 billion to $4.5 billion) relative to its initial cost goals, which were reflected in CBO's January 2003 study.

The original cost goals for the FCS were developed prior to the work that the Army and its contractors have conducted over the past two years to define the content of the FCS program and the capabilities it will provide. The Army's new, higher estimates of FCS costs are no longer simple goals but rather are based on the new definition of the program's expected content—and even that definition is still very preliminary. Thus, although the planned rate at which brigades would be equipped with the FCS has fallen from three per year to two, projected long-term annual investment costs for the FCS program have increased by about 50 percent. The Army's current projections indicate that the resources associated with the FCS through 2022 could total $148 billion.

CBO's January 2003 projection assumed that the Army would be completely equipped with the FCS by 2033; in the updated projection, that date slips to 2045. Partly as a result of that reduced pace, CBO now projects that Army ground combat equipment will have an average age of 17 years in 2020 (including more than 4,000 Abrams tanks that will be an average of 29 years old), compared with an average age of 10 years in CBO's previous projection.

Plans for the Army's aviation programs have also changed significantly in the past year. For example, the Comanche will no longer replace the Apache as the Army's attack helicopter, and the total planned purchase of Comanches has been cut from 1,250 helicopters to 650. CBO's updated projection incorporates that change, as well as a prospective program to extend the service life of Apaches beginning after 2010, which would enable them to continue operating past 2020—at which point the average age of the Army's aircraft would be 32 years.[12] CBO's current projection also reflects the Army's evolving plan to equip its future forces with more unmanned aerial vehicles to perform surveillance and reconnaissance missions.

### Navy and Marine Corps Investment

The 2004 FYDP and CBO's current projection envision providing greater investment resources to the Department of the Navy (which includes the Marine Corps) than the 2003 FYDP and CBO's January 2003 projection did. Current plans would increase Navy investment from $44 billion in 2004 to a peak of about $64 billion in 2010. (In the January 2003 projection, by comparison, investment spending peaked at $59 billion in 2010, expressed in 2004 dollars.) After that, investment resources would gradually decline to $33 billion by 2022—for an average of just over $47 billion a year between 2010 and 2022. If costs grew as they have in the past, however, the department's investment spending could rise to a peak of about $74 billion in 2010 and average $56 billion a year between 2010 and 2022, falling back to about $39 billion by the end of the period *(see Figure 4 on page 10)*.

Those projections are driven by planned procurement of battle force ships. CBO's outlook for such procurement is based on the Navy's plan to increase its fleet from about 300 ships today to 375 ships by 2022, as outlined in *A Report to Congress on Annual Long-Range Plan for the Construction of Naval Vessels*.[13] The report envisions that the Navy will spend an average of $16 billion a year (in 2003 dollars) between 2004 and 2025 to build new ships and upgrade old ones. CBO's projection is roughly consistent with that report because it estimates that the Navy would need to spend slightly more than $16 billion a year (in 2004 dollars) between 2004 and 2022 to build the 375-ship fleet. If historical trends in cost growth continued, however, the Navy would need to spend more than $19 billion a year through 2022 to reach 375 ships, based on CBO's understanding of the current plans for ship purchases.

12. Although Comanches are no longer expected to perform attack missions, CBO assumes that the Army will retain the capability to attack targets on the ground from the air. It is possible that in the future that capability could be provided by unmanned aerial vehicles (UAVs), but the Army has so far announced no explicit plans to develop UAVs to perform that mission. Therefore, for this projection, CBO assumes that the Apache, which currently performs that mission, will continue to operate through 2022.

13. That report, which was submitted to the Congress in May 2003, was mandated by the National Defense Authorization Act for Fiscal Year 2003.

Most of the planned increase in the Navy's fleet occurs in the surface combatant force. Today, that force comprises 107 cruisers, destroyers, and frigates. By 2022, under the Navy's plan, it will comprise 164 ships—including 56 small, fast vessels designed to counter area-denial threats that the Navy could face in the world's coastal regions. On the whole, the new plan is consistent with the plans implied in the 2003 FYDP and used in CBO's previous projection; however, there are some substantive changes in the details. The best information available to CBO for its January 2003 projection indicated that the Navy intended to buy 16 new destroyers, called DD(X)s, starting in 2005 and between 24 and 42 new cruisers, or CG(X)s, starting in 2014.[14] The new long-range shipbuilding report, on which CBO's updated projection is based, says that the Navy plans to buy 24 DD(X)s beginning in 2005 and 24 CG(X)s starting in 2018.[15] CBO estimates that the Navy's plan would cost about $4 billion a year between 2004 and 2022. If historical cost risk was factored in, the cost of the plan could rise to about $6 billion a year.

Notwithstanding some modest changes in planned procurement rates for attack submarines (SSNs), maintaining a force of 55 SSNs remains the Navy's most serious challenge. Under the 2003 FYDP, the Navy intended to buy only one attack submarine annually through 2007 and then increase purchases to three per year in 2008. Under the 2004 FYDP, the Navy envisions buying two submarines annually starting in 2007 and then increasing to three per year in 2012. If the four Trident submarines that the Navy is converting to a guided-missile (or SSGN) configuration are included, that plan will allow the Navy to maintain a force of at least 55 attack submarines through 2022. But sustaining that force will cost an average of more than $5 billion a year over the next two decades, or as much as $6 billion a year with cost risk.

Carrying out the Navy's plans for amphibious forces would also require greater resources over the next 20 years than the service spends today, by CBO's estimate. The Navy now intends to buy eight LPD-17s, five replacements for existing LHAs or LHDs, and 18 Maritime Prepositioning Force (Future), or MPF(F), ships between 2004 and 2022. CBO projects that the investment costs of building those ships would average about $3 billion a year over the next 20 years—nearly double the amount in CBO's projection based on the 2003 FYDP. The reason for the increase is that the capabilities now planned for the LHA replacements and MPF(F) ships are significantly greater than CBO assumed in its previous projection; thus, in CBO's new estimate, the costs of those ships are much higher. The Navy has not determined what capabilities later versions of the LHA (and eventually LHD) replacements will have. Some designs under consideration could push the cost of those ships even higher than CBO's cost-risk projection assumes.

With respect to aircraft investment, the Navy and Marine Corps now plan to integrate their tactical aircraft forces more fully, resulting in less need for new planes than CBO projected in January 2003.[16] That change from the 2003 FYDP has the effect of cutting projected purchases of tactical aircraft by about 500 planes over the next two decades—which, based on CBO's assumptions about the phasing of the cuts, reduces the projected need for investment resources after 2016. However, that change does not mean that the Navy would need to spend less on aircraft procurement in the near term and long term than it does today (or that it would have a smaller inventory of aircraft in the future than it does now). Fully funding the program of aircraft modernization envisioned in the 2004 FYDP would require the Navy to spend an average of almost $10 billion a year between 2004 and 2022, CBO projects, or more than $11 billion a year with cost risk.[17] By comparison, the Navy spent around $9 billion on aircraft in 2003.

14. CBO also used those assumptions in its study *Transforming the Navy's Surface Combatant Force* (March 2003).

15. That report also states that the Navy plans to replace its Arleigh Burke destroyers, although that would not occur until after the period covered by CBO's projection. CBO's January 2003 projection assumed that the Navy would use the CG(X) to replace Arleigh Burkes when they begin to retire in the 2020s.

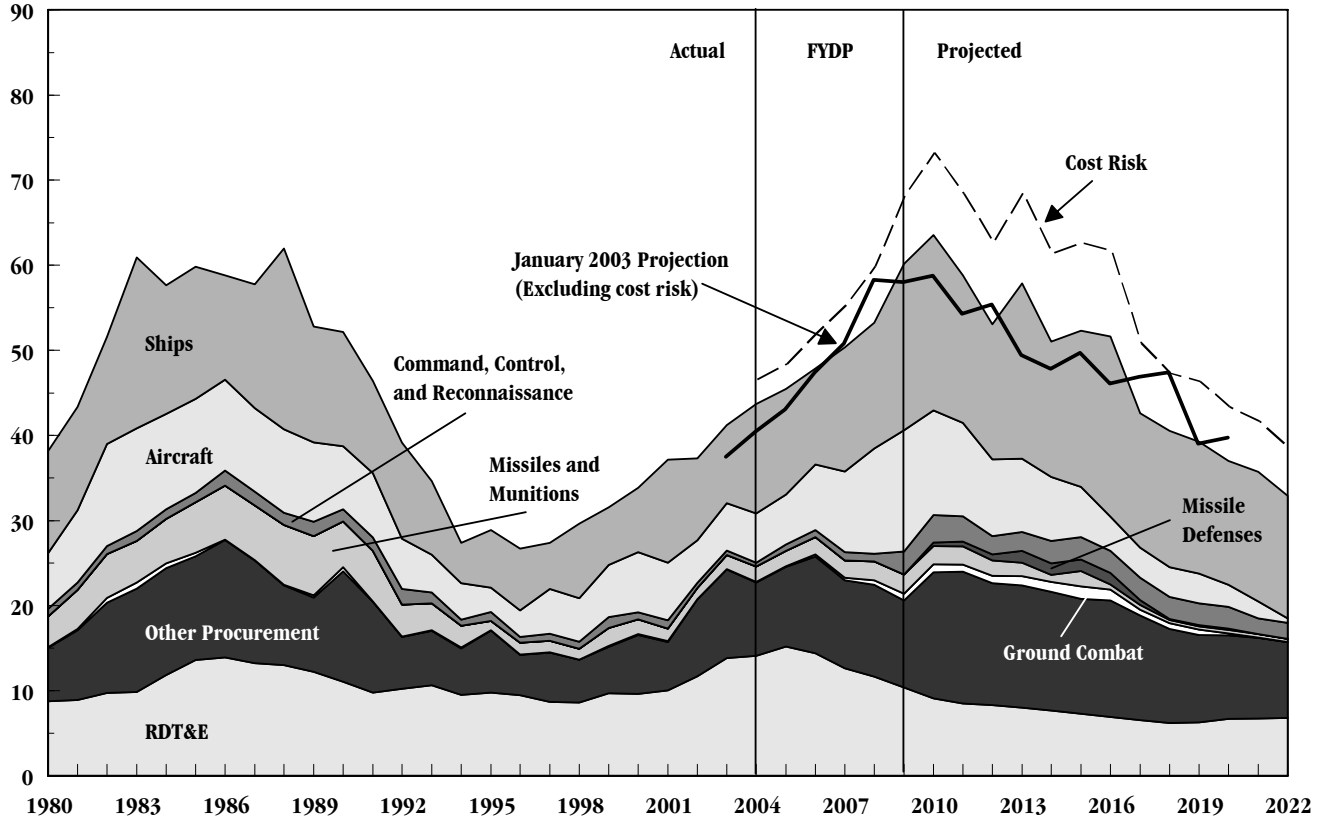
16. The Department of the Navy has decided to formally incorporate Marine Corps F/A-18 squadrons into the air wings based on Navy carriers, as it has done informally for years. It is also increasing the amount of such integration, which reduces the need to purchase fighter planes.

17. Those figures include funds for all purchases of Navy aircraft.

**Figure 4.**

## Past and Projected Navy and Marine Corps Resources for Investment

(Billions of 2004 dollars)




Source: Congressional Budget Office.

Note: FYDP = Future Years Defense Program; RDT&E = research, development, test, and evaluation.

The Marine Corps's plans for items purchased through its procurement account changed little between the 2003 and 2004 FYDPs. Plans to invest heavily in ground combat vehicles (such as the advanced amphibious assault vehicle and the future light combat vehicle) to replace the service's current inventory of aging equipment will necessitate substantial resources over the next 20 years. Carrying out those plans would require average spending of about $600 million a year through 2022 (even without factoring in cost growth)—three times the roughly $200 million a year that the procurement account has received over the past two decades.

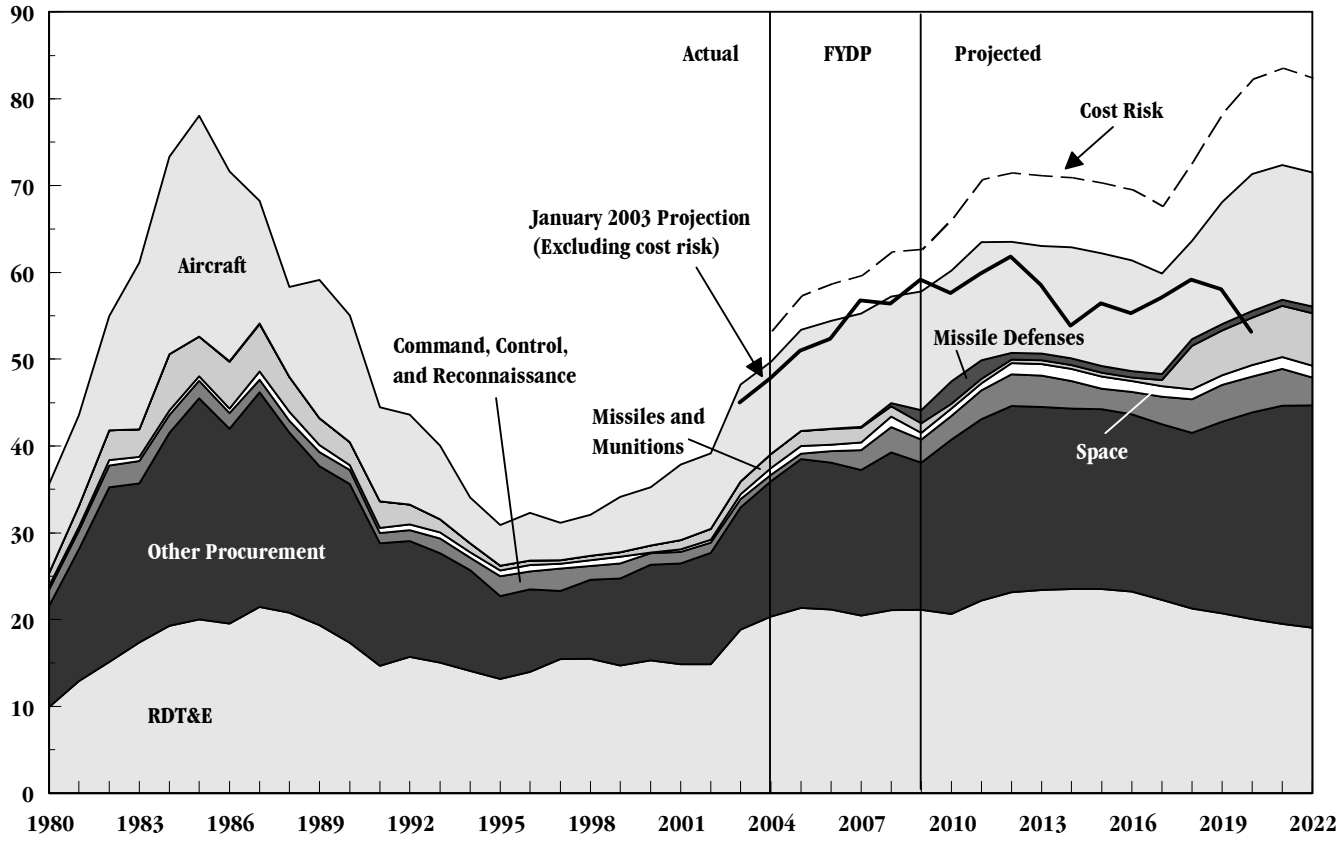
### Air Force Investment

The 2004 FYDP allocates an average of $1 billion more per year in investment resources to the Department of the Air Force than the 2003 FYDP did. Under DoD's current plans, Air Force investment would increase from $50 billion in 2004 to $58 billion by 2009. On the basis of those plans, CBO now projects that demand for Air Force investment resources would average $64 billion annually between 2010 and 2020 (or $72 billion a year with historical cost growth) versus an average of $57 billion annually under CBO's previous projection.

**Figure 5.**

## Past and Projected Air Force Resources for Investment

(Billions of 2004 dollars)




Source: Congressional Budget Office.

Note: FYDP = Future Years Defense Program; RDT&E = research, development, test, and evaluation.

The most significant differences between the two projections occur after 2012 *(see Figure 5)*. In CBO's updated projection, Air Force investment is fairly steady from 2013 to 2017 and then rises rapidly, peaking at $72 billion in 2021. In the previous projection, that investment peaked at $62 billion in 2012 and then declined to $53 billion in 2020. The differences result from increases in projected costs for some planned programs, partially offset by delays in projected start dates for other programs.

Both projections include sustained increases in purchases of new fighter aircraft—reflecting continued production of the F/A-22 fighter through 2011 (although the current estimate contains only 80 percent of the previously projected total purchase, in keeping with changes in the 2004 FYDP) and the beginning of production of the Joint Strike Fighter in 2006, continuing through 2022 at a rate of 110 aircraft per year. Both projections also sustain, over the long term, the increases in investment for intelligence and command-and-control capabilities contained in the 2003 and 2004 FYDPs. But CBO's updated projection assumes later starts for several prospective modernization programs than the earlier projection did, thus moving the resource demands associated with those pro-

grams to later years. For example, it assumes that production of a new land-based intercontinental ballistic missile will begin in 2018 rather than 2015 and that production of a new long-range strike aircraft (to replace the current B-52, B-1, and B-2 bomber fleets) will begin in 2019 rather than 2017. As a result, CBO's new projection increases rapidly after 2017, peaking only four years later. Those changes account for the majority of the $12 billion increase in annual spending between 2017 and 2021.[18]

The savings produced by those delays and reductions are more than offset in CBO's projection by higher costs for some command-and-control, space, and intelligence-related programs. Those cost increases reflect CBO's understanding of the Air Force's efforts over the past year to define the capabilities it is seeking from those programs. For example, CBO's current projection doubles —to more than $400 million per plane—the cost of producing the multimission command-and-control aircraft ($MC^2A$) that is intended to replace today's fleets of Joint Surveillance Target Attack Radar System (JSTARS) aircraft and Airborne Warning and Control System (AWACS) aircraft.[19] Also, the costs that CBO assumes for the satellites developed and produced under DoD's new transformational satellite communications program have substantially increased, and projected costs for several other space programs have risen, reflecting the Air Force's most recent long-range projections.

CBO assumed that all of the Air Force's intelligence-related activities would be funded through the end of the projection period at the level proposed for the last year of the FYDP. As a result, the projected demand for investment resources for those activities exceeds CBO's January 2003 projection by about $3 billion per year.

CBO's current projection also incorporates DoD's recently announced plan to lease—rather than purchase—100 Boeing 767 aircraft (after converting them to a tanker configuration) to replace the existing fleet of KC-135E tankers. The Air Force plans to lease four of those aircraft beginning in 2006. More 767s would be leased each year through 2011, for a total of 100 tankers. CBO's projection assumes that after 2011, the Air Force would replace each of its remaining KC-135s (about 400) by executing six-year leases for additional tankers and then purchasing those tankers at the end of their leases. In contrast, CBO's previous projection assumed that the Air Force would buy those planes up front rather than lease them initially and buy them later. In that projection, the Air Force would not have had all 100 new tankers in operation until 2016, because CBO assumed (consistent with the 2003 FYDP) that the first tanker purchase would occur in 2007.

### Investment for Defense Agencies, Including Missile Defenses

In addition to funding the Departments of the Army, Navy, and Air Force, DoD's budget provides money for a variety of specialized agencies that are responsible for performing advanced research, developing missile defenses, overseeing special operations, and developing and managing information systems. The investment funding allocated to those activities in the 2004 FYDP averages about $5 billion more per year for the 2004-2009 period than it did in the previous FYDP (and CBO's January 2003 projection). Under DoD's current plans, total investment funding for defense agencies would increase from $24 billion in 2004 to $28 billion in 2009. Of that amount, funding for research on missile defenses would rise from $8 billion in 2004 to $9 billion in 2009.

Carrying out those plans would require defense agencies to spend an average of $24 billion a year on investment between 2010 and 2020 (excluding cost risk), CBO now projects—up from an average of $16 billion a year in CBO's previous projection *(see Figure 6)*. Most of that increase stems from two factors. First, CBO assumed that the new investment spending allocated by DoD for transformation-related activities would remain at the 2009 level (about $5 billion) through 2022. Second, investment funding for land-based and space-based interceptors for ballistic missile defense—which would grow from $92

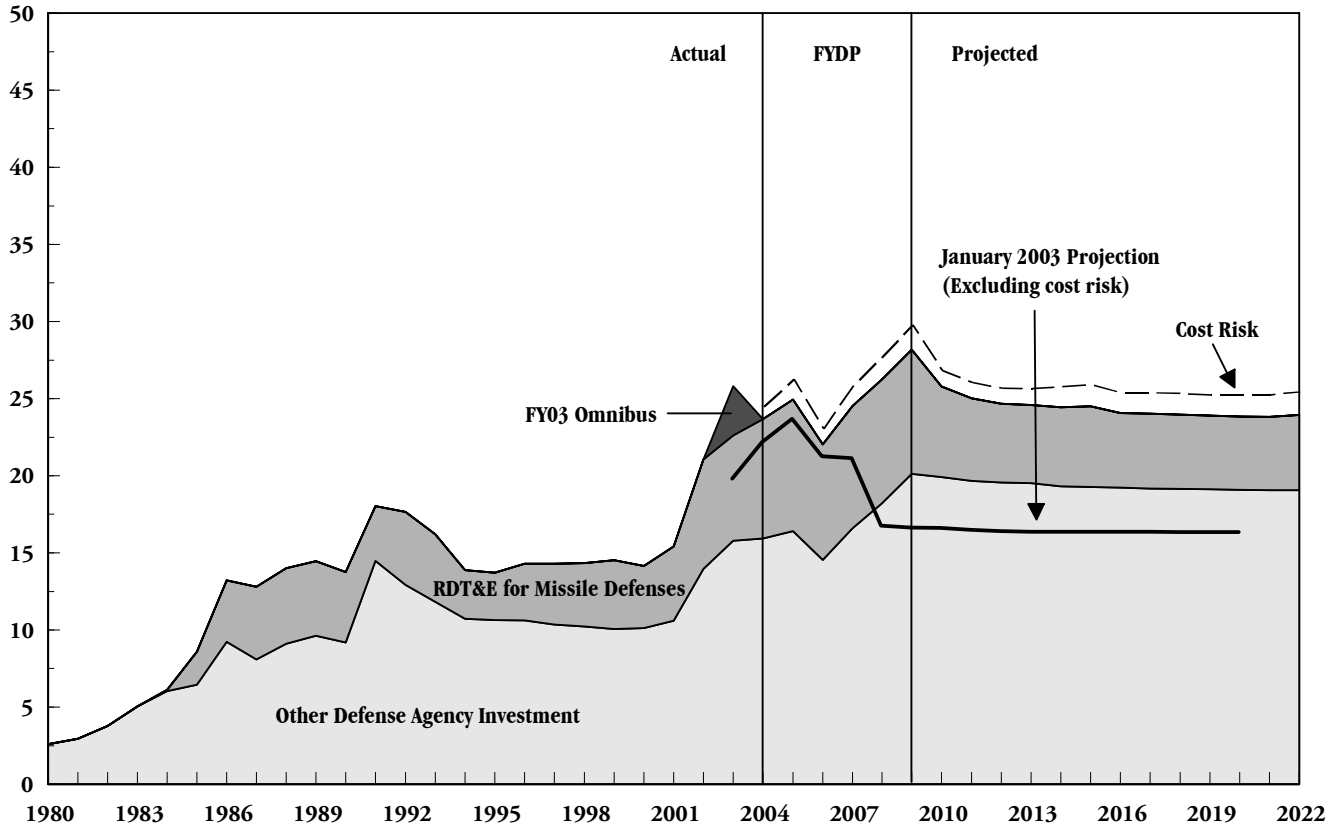
18. That increase in investment at the end of the projection period would be reduced if programs could be delayed even further. For example, postponing production of the long-range strike aircraft until 2025, when ongoing fighter programs are due to be completed, could reduce annual resource demands by as much as $4 billion over the 2017-2022 period.

19. The existing JSTARS, which uses refurbished Boeing 707 airframes, cost about $350 million per aircraft to produce. The $MC^2A$ will use new airframes and should be no less complex than JSTARS, implying that its cost is unlikely to be lower than that of JSTARS.

**Figure 6.**

## Past and Projected Defense Agency Resources for Investment

(Billions of 2004 dollars)




Source: Congressional Budget Office.

Note: FYDP = Future Years Defense Program; RDT&E = research, development, test, and evaluation; FY03 Omnibus = funding provided for fiscal year 2003 in the Consolidated Appropriations Resolution (Public Law 108-7). The 2004 FYDP did not incorporate that 2003 omnibus funding; CBO chose to display the additional investment funding from that law as defensewide investment.

million this year to $2.6 billion in 2009 under DoD's current plans—is projected to continue at the 2009 level through 2022.

Apart from the increase in investment funding for new interceptors, CBO's current projection for developing and deploying missile defenses is essentially unchanged from its January 2003 projection. The previous projection anticipated DoD's decision (announced this year) to pursue an initial deployment of land- and sea-based interceptors that could later be expanded. Both the current and former CBO projections assume that the limited deployment is expanded to consist of 250 interceptors located at two ground sites, as well as the additional ground-based radars and communications facilities and space-based infrared sensors that would be used to support those interceptors. Other missile defense interceptors are assumed to be deployed on the Navy's air-defense-capable cruisers and destroyers.

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