Statement of
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before the
Subcommittee on Seapower and
Strategic and Critical Materials
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Mr. Chairman, the Congressional Budget Office (CBO) appreciates the opportunity to testify today on the costs of attaining and sustaining the 600-ship Navy. When the current Administration assumed office in January 1981, it established the objective of building up the total number of the Navy's "battle force" ships to over 600 by the end of the 1980s. This numerical goal was a shorthand for more specific force structure and modernization goals, such as increasing deployable carrier battle groups from 12 to 15--with a comparable increase in aircraft to fly from these carriers--and expanding the number of nuclear attack submarines.

The ensuing expansion has raised concerns about the budgetary implications of attaining and maintaining such a force, and the concerns could be well-founded. From 1980 through 1985, the Navy's total budget grew at a real (that is, inflation adjusted) rate of 7.5 percent a year. Over the next decade, CBO estimates that the Navy's budget would have to increase at a real rate of between about 3 percent and 5 percent a year to meet all of the Navy's goals. Such sustained growth, while clearly not impossible, would be unprecedented in peacetime and, in constant dollars, would lead to a doubling of the Navy budget between 1980 and 1994.

My testimony today will first describe CBO's projections of budgets needed to meet current Navy goals. These projections are contained in CBO's just released study entitled Future Budget Requirements for the 600-Ship Navy. Then I will outline several strategies that accomodate lower

growth in the Navy's budget, should the Congress find that necessary. Each of these strategies, however, would provide a different Navy and, quite possibly, one that is less capable than the version currently planned.

FUTURE NAVY BUDGET COSTS

Ships and Aircraft

The Navy should meet its 600-ship goal by about the end of this decade. Primarily as a result of ships authorized before 1981, the number of battle force ships has grown from 479 at the end of fiscal year 1980 to 534 as of May 31, 1985. In the meantime, the Administration requested and the Congress provided a series of shipbuilding budgets that together were about 60 percent higher over the 1982-1985 period than those of the preceding Administration. The resulting ships will start to enter the fleet about 1986. Their influx, coupled with an unusually low number of ship retirements projected for the remainder of the 1980s, should enable the Navy to realize its goal of 600 ships in the battle force by the end of the 1980s or the early 1990s.

Attainment of 600 battle force ships does not, however, fulfill all the Administration's naval goals. Still higher levels of shipbuilding would be required to achieve force structure and modernization goals beyond the general objective of 600 ships. These include obtaining 15 deployable

carriers and the modern escorts to accompany them, increasing the number of nuclear attack submarines from 90 to 100, expanding amphibious lift capability by 50 percent, and continuing to replace retiring ships with more modern (and more expensive) versions. CBO estimates that these goals will require continued real growth in the shipbuilding and conversion (SCN) budget averaging at least 5 percent a year into the mid 1990s. (Through 1990, CBO's cost estimates are based on Administration plans; in years beyond 1990, when such plans are not published, CBO used retirement factors to estimate the numbers of ships necessary to achieve and maintain planned force levels.)

In contrast to the 600-ship goal, plans to expand and modernize Navy and Marine Corps combat air forces probably will not be fully realized over the next five years. The Navy plans to increase the number of carrier air wings in the active-duty Navy from 12 to 14 to complement the expansion of deployable aircraft carriers to 15. (An air wing consists of 80 to 90 aircraft that operate off an aircraft carrier plus about 50 percent more airplanes per wing needed to provide for training and support requirements.) The Navy also intends to alter the composition of its air wings according to a new plan that calls for more medium attack aircraft (the A-6) but fewer light attack aircraft (the F/A-18) than in the past. The Navy will continue to retain older aircraft, however, and current force plans will result in an average retirement age of 24 years.

Navy plans submitted in February 1985 suggest that by 1992--when all the aircraft purchased over the next five years will be operational--the Navy will still be short 366 aircraft of nine different types, although it will have an excess of 239 aircraft of five other kinds. To rectify these problems and meet current goals for expansion and modernization, aircraft budgets would have to increase through 1990 by at least 6 percent a year after inflation; following the buildup, sustaining budgets would fall below 1990 levels but would still remain about 19 percent above the 1985 level.

The cost estimates just described assume no growth beyond today's levels in the real unit costs of ships and aircraft. The Navy has recently held down unit cost growth, sometimes even achieving reductions. Over the long run, however, unit costs have increased faster than inflation because of improvements in the weapons systems and other factors. Ships built in the 1960s and 1970s displayed average unit cost increases of about 3 percent a year above the rate of inflation. Unit costs of aircraft purchased since 1980 have increased at a real rate of 3.8 percent a year. If such increases recur, then the costs of meeting goals for ships and aircraft would be higher than those estimated above.

Other Costs

Shipbuilding and aircraft procurement make up about 24 percent of the Navy's 1985 budget. The Navy budget must also cover investment costs for

research and development, munitions, Marine Corps equipment, military construction, and so forth. In recent years, these costs have typically consumed an additional 22.5 percent of the total Department of the Navy budget, and CBO assumes they remain at that level in the future.

The Navy must also pay for important support costs--mainly the appropriations for operation and maintenance and for military personnel. Because of the difficulty in relating support costs to readiness--and hence in knowing how much support is needed--our analysis relies upon three alternative projections to bound the plausible range of future support costs.

RESULTS OF ALTERNATIVE ASSUMPTIONS

Alternative assumptions about key budget factors lead to a range of estimates for future Navy funding needs. All estimates assume that money is provided to meet the Navy's ship and aircraft goals. The lower end of the range of estimates assumes no future real growth in unit costs of weapons and the lowest of the support cost estimates used in the study (roughly 1 percent annual real growth in support over the next 10 years). These assumptions would still imply real growth in the total Navy budget averaging 2.5 percent a year for the next decade. The upper end of the range assumes 3 percent annual real growth in unit weapons costs (consistent with longer-run history) and more generous support funding (growth of about 3 percent a year). This leads to average real growth in

the total Navy budget of 5.1 percent a year. The middle range--which yields real growth of 4.2 percent a year--assumes growth in unit weapons costs and the middle of the study's three projections of support costs.

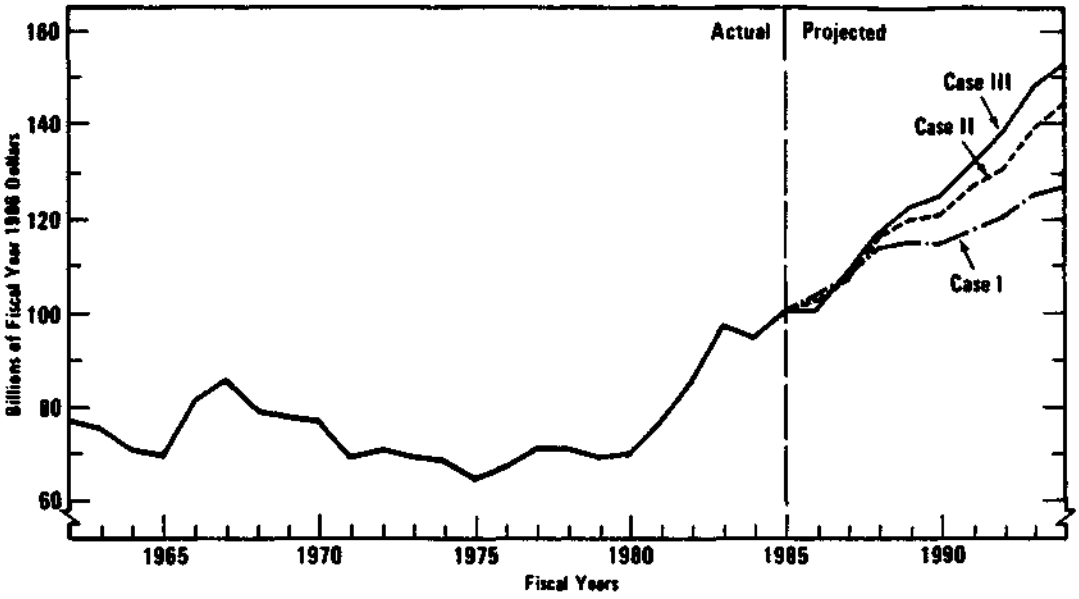
Case	Fiscal Years 1985-1994 Annual Real Growth Rate (In percents)	Fiscal Year 1994 Budget Estimate (In billions of fiscal year 1986 dollars)
I	2.5	126.5
II	4.2	144.6
III	5.1	153.1

While the support cost increases seem reasonable today, they are uncertain and could be low. By 1995 the projected budgets have a ratio of investment to support costs ranging from 1.04 to 1.25, well above today's level of 0.88 or the 1970s average of 0.73. If this projection of declining support expenditures relative to investment is not fully realized, our support cost estimates could understate actual budget requirements.

The Summary Figure on the following page plots the projected budget requirements through fiscal year 1994, together with actual appropriations for the Department of the Navy from 1962 through 1985, adjusted for inflation. The Navy budget was remarkably stable during the 1960s and

Summary Figure.

Alternative Cases for Navy Budget Projections



SOURCE: Congressional Budget Office.

1970s--apart from a modest increase during the Vietnam War years--with no sustained period of real growth exceeding three years. The results of CBO's analysis, however, indicate a need for continued growth for an additional nine years beyond 1985 to achieve and sustain current naval force objectives. If this should occur, Navy budgets would be about double the 1960s-1970s norm before they begin to level off again in the mid-1990s.

STRATEGIES TO ACCOMMODATE LOWER NAVY BUDGETS

Although Navy budgets could expand enough to accomplish all current goals, recent limitations on overall defense budget growth suggest that the Navy might have difficulty achieving these sustained increases. Accomodation to limitations on overall defense budget growth would be more efficient if a strategy were developed well in advance. To illustrate possible effects on the Navy of budgetary limits, CBO considered three different ways to hold Navy expenditures to zero real growth over the next 10 years. That would mean spending about $250 billion less over those 10 years as compared with roughly 4 percent annual real growth--which is the middle of the range of estimates discussed above. I want to emphasize that the choice of zero growth is arbitrary and constitutes no recommendation on our part. It simply allows concreteness in our assessment of needed changes in plans to accommodate lower Navy budgets. Nor are the strategies discussed below exclusive or exhaustive; rather they suggest basic modes of emphasis.

Strategy I--Cut Investment Resulting in a Smaller or Older Navy

Strategy I would emphasize cuts in investment to be achieved by accepting a smaller or older Navy. This strategy assumes that 80 percent, or $200 billion, of the reduction needed to achieve zero real growth would come from the investment accounts and that each category of investment would be cut in proportion to the projected share it holds from 1986 through 1995. The shipbuilding budget, for example would be reduced by $61.8 billion over the next 10 years. Assuming a proportional reduction in the number of ships procured, a total of only 151 ships would be authorized contrasted with the 216 CBO estimates would be needed to meet current force goals during the 1986-1995 period. Thus, assuming no change in ship retirement plans, a fleet totaling about 600 ships in 1990 under Navy plans would settle back under Strategy I to about 535 ships by the end of the 1990s. If, however, the numbers of new auxiliary and support ships were reduced more than proportionately in order to protect the procurement of more expensive combatants, then the reduction in numbers of ships would be still higher. Zero real growth for a period of 10 years, therefore, could result in a fleet numbering much closer to 500 than to 600 by the end of the century.

Aircraft procurement would be similarly affected. Under this strategy's assumptions, a reduction of $51.0 billion in aircraft procurement would occur over the 10-year period. This could lead to about 2,000 aircraft (again, assuming a proportionate reduction) compared with the 3,000

estimated by CBO as necessary to realize current force goals. The reduction could be even larger if fewer purchases raised the unit costs of aircraft.

The effect of such reductions in the numbers of ships and aircraft in the fleet might be mitigated by keeping older ships and aircraft in the fleet longer than current practice. This could maintain the numerical size of the fleet at higher levels but would not, of course, achieve fleet modernization.

Unfortunately, there are no comprehensive measures of effectiveness to suggest how much such a strategy would harm naval capability. Clearly, though, having fewer ships and aircraft would degrade U.S. capabilities below the levels judged necessary by the Navy. In peacetime, reduced capabilities could require fewer deployments or greater time at sea for naval personnel with adverse effects on retention. In wartime, there would be some increase in risk that security objectives would not be fully achieved.

Strategy II--Reduce Support Expenditures

Strategy II would achieve zero real growth primarily through reductions in support costs. Many believe that, because of the difficulty of altering investment plans, reductions in support are a likely way to achieve savings. It certainly might be possible to achieve some efficiencies in support expenditures. The Navy has already sought efficiencies to hold down the

number of personnel it needs, and more of these and other types of efficiencies might be possible.

On the other hand, it is unlikely that the support accounts alone could provide enough spending reductions to accommodate budget deficiencies of the magnitude assumed under zero real growth. In 1980, when the fleet was smaller, support budgets were almost unanimously believed to be inadequate. Yet even if all growth in the support budgets since 1980--except that which offset inflation--was removed and no further growth was allowed, only about $186 billion of the required $250 billion would be eliminated. Cuts in support funding, therefore, could contribute to making up budget shortfalls; but, except in cases of relatively modest deficiences, they probably could not carry the full burden.

Strategy III--Procure Less Expensive Ships

Like Strategy I, which leads to a smaller or older Navy, Strategy III would absorb most of the budget deficiencies in the investment accounts, but it would maintain fleet size by developing less expensive ships, aircraft, and weapons. If one believes, as some do, that a large fraction of the cost of modern military systems is spent extracting a small extra margin of performance from complex technology, then this approach might be attractive. A CBO report, Building a 600-Ship Navy: Costs, Timing, and Alternative Approaches published in March 1982, illustrates this approach

for ships. That report examined alternative 10-year shipbuilding programs in detail and found that incorporating lower-cost ships could produce savings of over $70 billion (in fiscal year 1986 dollars) over the 10-year period while providing the same number of ships. The principal types of new ships suggested were a lower-cost guided missile destroyer, a V/STOL cruiser, and a diesel-electric submarine. If shipbuilding savings of $70 billion could be achieved, it would be more than enough to offset the expected deficiencies in the shipbuilding budget that would result from zero real growth. Analogous changes in aircraft and other budgets, plus some savings in the support budget, would be needed to achieve zero real growth in the entire Navy budget.

Of the three strategies, the effect of Strategy III on naval effectiveness is the most difficult to assess. Some naval authorities have argued for a "distributed force"--one that distributes ships geographically in order to confuse the enemy's targeting and prevent him from massing his attacking forces against a few all-important targets like carrier battle groups. The capabilities of the ships in Strategy III would fit this distributed force concept. Because they are less expensive than the ships the Navy plans to buy, they could also be purchased in larger numbers. The Navy, however, believes that carrier battle groups--defended in depth by various types of ships and aircraft--are the key to wartime success and effective

peactime presence. In the Navy's view, ships procured under Strategy III might not provide the appropriate capability.

CONCLUSION

There are clearly no easy answers, Mr. Chairman, to the problems that would be created by budget growth falling considerably short of that required to accomplish the Navy's current objectives. Compromises would have to be made in force levels, readiness, or unit capability or, especially in the case of larger budget shortfalls, all of these. Contentious decisions about the types of ships and aircraft to buy would be all the more difficult.

As I said earlier, accommodation to such budget deficiencies would be more efficient if a strategy were developed well in advance. This is particularly true for Strategy III; alternative designs for less expensive ships, aircraft, and weapons must be begun well in advance for such substitutions to be a true option. Thus, it is important for the Congress and the Administration to assess long-term Navy plans now in light of probable future budgets and to revise the plans if needed.