

# Policy Analysis

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Routing


## *\$400 Billion Defense Budget Unnecessary to Fight War on Terrorism*

by Charles V. Peña

### Executive Summary

President Bush signed a \$417.5 billion defense appropriations bill for fiscal year 2005 on August 5, 2004. With the addition of an \$82 billion supplemental for military operations in Iraq and Afghanistan, in real terms U.S. military spending will be at a level exceeded only by that of the waning years of World War II and the height of the Korean War. The Defense Department had requested \$401.7 billion, which was a 7 percent increase over the FY04 defense budget. The recently submitted FY06 Pentagon budget is \$419.3 billion (not including funds for military operations in Iraq and Afghanistan). The administration argues that increased military spending is a necessary part of the war on terrorism.

Those budgets assumed that the war on terrorism is primarily a military war to be fought by the U.S. Army, Navy, Air Force, and Marines. The reality is that large conventional military operations will be the exception rather than the rule in the war on terrorism. Although President Bush claims Iraq is the central front in the war on terrorism, the truth is that ridding the world of Saddam Hussein's brutal regime did not eliminate an Al Qaeda sanctuary or a primary source of support for the terrorist group.

The military's role in the war on terrorism will mainly involve special operations forces in discrete

missions against specific targets, not conventional warfare aimed at overthrowing entire regimes. The rest of the war aimed at dismantling and degrading the Al Qaeda terrorist network will require unprecedented international intelligence and law enforcement cooperation, not expensive new planes, helicopters, and warships.

Therefore, an increasingly large defense budget (DoD projects that the budget will grow to more than \$487 billion by FY09) is not necessary to fight the war on terrorism. Nor is it necessary to protect America from traditional nation-state military threats—the United States is in a unique geostrategic position; it has no military rivals and is relatively secure from conventional military attack because of vast oceans on its flanks and friendly neighbors to the north and south.

In fact, U.S. security would be better served by adopting a less interventionist policy abroad and pulling back from the Cold War—era extended security perimeter, which necessitates forward-deployed military forces around the world. If the United States adopted a balancer-of-last-resort strategy (allowing other countries to manage the security of their own regions), most overseas U.S. military deployments could be eliminated and the defense budget could be substantially reduced.

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**In 2003  
U.S. defense  
expenditures  
exceeded the  
combined defense  
expenditures of  
the next 13  
countries.**

**Introduction**

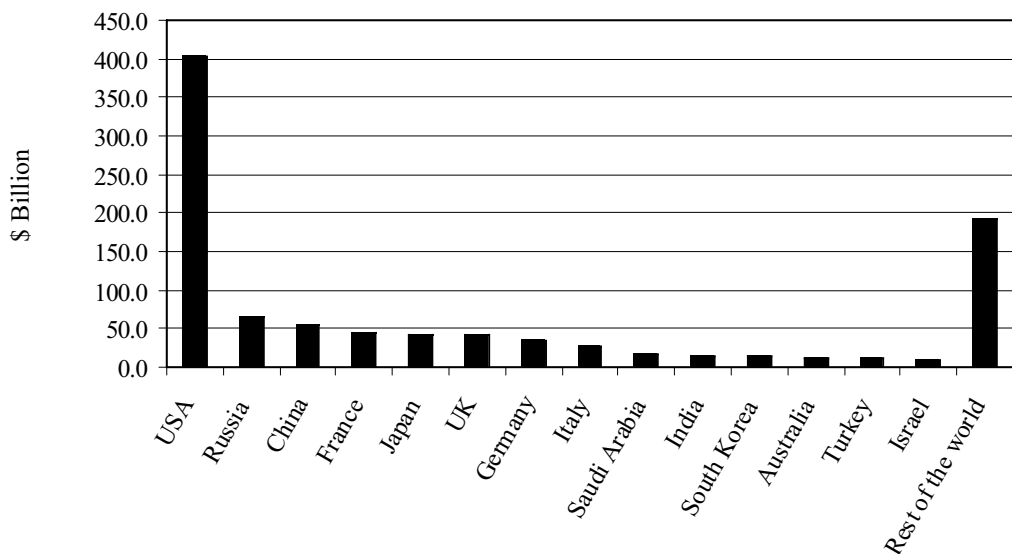
On August 5, 2004, President Bush signed the Defense Appropriations Act for fiscal year 2005, which totaled \$417.5 billion including \$25 billion for military operations in Iraq and Afghanistan.<sup>1</sup> The White House is also asking for an additional \$82 billion in supplemental funding for Iraq and Afghanistan,<sup>2</sup> which would bring military spending for FY05 to nearly \$500 billion—more in real terms than during any of the Reagan years and surpassed only by spending at the end of World War II in 1945 and 1946 and during the Korean War in 1952. The FY05 Department of Defense budget request was \$401.7 billion,<sup>3</sup> which did not include funding for military operations in Iraq and Afghanistan. According to the Defense Department, “The fiscal 2005 budget includes robust readiness and acquisition funding, important legislative authorities, and other essentials for winning the global war on terrorism.”<sup>4</sup> The White House is asking \$413.9 billion for the Pentagon in FY06.<sup>5</sup>

According to the International Institute for Strategic Studies (IISS), in 2003 (the last year for which there are comparable worldwide

data) total U.S. defense expenditures were \$404.9 billion.<sup>6</sup> That amount exceeded the combined defense expenditures of the next 13 countries and was more than double the combined defense spending of the remaining 158 countries in the world (Figure 1). The countries closest in defense spending to the United States were Russia (\$65.2 billion) and China (\$55.9 billion). The next five countries—France, Japan, the United Kingdom, Germany, and Italy—are all U.S. allies. In fact, the United States outspent its NATO allies nearly two to one (\$404.9 billion vs. \$221.1 billion). And the United States had friendly relations with 12 of the 13 countries (which included another NATO ally, Turkey, as well as South Korea and Israel). Finally, the combined defense spending of the remaining “axis of evil” nations (North Korea and Iran) was about \$8.5 billion, or 2 percent of U.S. defense expenditures.

From a three-year historical viewpoint, non-U.S. global defense expenditures increased from \$541.8 billion in 2001 to \$617.9 billion in 2003 (in constant 2005 dollars), or 14 percent. During the same period, U.S. defense expenditures increased from \$335.9 billion to \$422.5 billion (in constant 2005 dollars), or 26 per-

**Figure 1  
Comparison of 2003 Defense Expenditures**



Source: IISS, *The Military Balance 2004–2005* (London: Oxford University Press, 2004), pp. 353–58.

cent, nearly twice as much as the rest of the world.<sup>7</sup> Or put another way, U.S. defense spending went from 38 percent of the world's defense spending in 2001 to 41 percent in 2003. If those growth rates (approximately 4.5 percent annually for the rest of the world and 8.5 percent annually for the United States) were sustained, in 10 years U.S. defense expenditures would nearly equal what the rest of the world combined spends.

The six-year trend shows that U.S. defense expenditures grew from \$338.1 billion in 1997 to \$422.5 billion in 2003, while the rest of the world's defense expenditures fell from \$656.0 billion to \$617.9 billion (in constant 2005 dollars) during the same period.<sup>8</sup> In other words, U.S. defense expenditures grew at about 4 percent per year while the rest of the world's expenditures declined about 1 percent annually. If the six-year trend is used, U.S. defense expenditures will exceed those of the rest of the world combined in eight years. Although it is impossible to accurately predict future defense expenditures, it is probably safe to say that the United States is on track to outspend the rest of the world combined sometime during the next 10–20 years, especially if the longer-term trend is declining defense expenditures for the rest of the world.

Is such a large defense budget necessary to provide security against the threats the United States faces? Is such spending necessary to fight the war on terrorism?

## **The 21st-Century Threat Environment**

U.S. defense spending should be put in perspective relative to the 21st-century threat environment. Since the demise of the Soviet Union, the United States no longer faces a serious military challenger or global hegemonic threat. President Vladimir Putin has charted a course for Russia to move closer to the United States and the West, both politically and economically, so Russia is not the threat that the former Soviet Union was. Indeed, Russia now has observer status with NATO—a dramatic

change, given that the NATO alliance was created to contain the former Soviet Union. And in May 2002 Russia and the United States signed the Strategic Offensive Reductions Treaty (SORT) to reduce their strategic nuclear arsenals to between 1,700 and 2,200 warheads each by December 2012. According to IISS, “despite disagreement over the U.S.-led action in Iraq, the bilateral relationship between Washington and Moscow remains firm.”<sup>9</sup>

And even if Russia were to change course and adopt a more hostile posture, it is not in a position to challenge the United States either economically or militarily. In 2003 Russia's gross domestic product was a little more than a tenth of U.S. GDP (\$1.3 trillion vs. \$10.9 trillion).<sup>10</sup> And although a larger share of Russia's GDP went for defense expenditures (4.9 percent vs. 3.7 percent),<sup>11</sup> in absolute terms the United States outspent Russia by more than six to one. So Russia would have to devote more than 20 percent of its GDP to defense—which would exceed what the Soviet Union spent during the height of the Cold War during the 1980s<sup>12</sup>—to equal the United States.

Certainly, Chinese military developments bear watching. Although many observers see China as the next great threat,<sup>13</sup> even if China modernizes and expands its strategic nuclear force (as many military experts predict it will), the United States will retain a credible nuclear deterrent with an overwhelming advantage in warheads, launchers, and variety of delivery vehicles. According to a Council on Foreign Relations task force chaired by former secretary of defense Harold Brown:

[T]he People's Republic of China is pursuing a deliberate and focused course of military modernization but . . . it is at least two decades behind the United States in terms of military technology and capability. Moreover, if the United States continues to dedicate significant resources to improving its military forces, as expected, the balance between the United States and China, both globally and in Asia, is likely to remain deci-

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sively in America's favor beyond the next twenty years.<sup>14</sup>

Like Russia, China may not have the wherewithal to compete with and challenge the United States. The 2003 U.S. GDP was almost eight times more than that of China (\$10.9 trillion vs. \$1.4 trillion).<sup>15</sup> China spent fractionally more of its GDP on defense than did the United States (3.9 percent<sup>16</sup> vs. 3.7 percent), but in absolute terms U.S. defense expenditures were seven times those of China (\$404.9 billion vs. \$55.9 billion).<sup>17</sup> So China would have to devote one-quarter of its GDP to defense to equal the United States.

The Russian and Chinese militaries are not serious threats to the United States,<sup>18</sup> and so-called rogue states—such as North Korea, Iran, Syria, and Cuba—are even less of a threat. Though those countries are unfriendly to the United States, none has any real military capability to threaten or challenge vital American security interests. In economic terms, the GDP of those four countries was \$590.3 billion<sup>19</sup> in 2003 compared to a U.S. GDP of \$10.9 trillion,<sup>20</sup> or less than 5.5 percent of the U.S. GDP. Military spending is even more lopsided: \$11.3 billion<sup>21</sup> compared to \$404.9 billion, or less than 3 percent of U.S. defense spending.

North Korea is a concern because of its ongoing nuclear weapons and ballistic missile programs.<sup>22</sup> But even if the North Koreans eventually acquire a long-range nuclear capability that could reach the United States, the U.S. strategic nuclear arsenal would continue to act as a powerful deterrent. Iran is also pursuing a ballistic missile program and may be attempting to develop nuclear weapons, but the Iranian programs are less advanced than North Korea's.<sup>23</sup> And both North Korea's and Iran's conventional military capabilities pale in comparison to those of the United States.

## **Downsizing the U.S. Military**

The key question for defense spending is, How much is enough? The FY05 Defense Department budget is roughly 10 percent larg-

er than the average Cold War budget in real terms, and spending is projected to increase to about 20 percent above average Cold War levels by 2009. But if the United States does not face the same kind of military adversary as the former Soviet Union during the Cold War, is a larger defense budget necessary? According to Steven M. Kosiak at the Center for Strategic and Budgetary Assessments:

Whether the requested increase in defense spending is necessary to meet U.S. security requirements adequately is unclear. . . . [I]t might be possible to meet U.S. security requirements adequately at lower budget levels by adopting a scaled-back and more transformation-oriented defense plan. In other words, the ability of the U.S. military to meet future challenges effectively is likely to have more to do with how wisely we spend our defense dollars, than [with] how much more we spend.<sup>24</sup>

According to the Department of Defense, prior to Operation Iraqi Freedom the total number of U.S. active duty military personnel was more than 1.4 million troops, of which 237,473 were deployed in foreign countries.<sup>25</sup> Assuming twice as many troops (deployed in the United States) are needed to rotate those deployments at specified intervals,<sup>26</sup> then one way to measure the cost to the United States of maintaining a global military presence is to calculate the cost of more than 700,000 active duty troops along with their associated force structure. Since the United States lacks a great power enemy that might justify an extended forward deployment of military forces, the United States can dramatically reduce its overseas commitments, and U.S. security against traditional nation-state military threats can be achieved at significantly lower costs.

The very different 21st-century threat environment (in terms of traditional nation-state militaries that have the ability to attack the United States or challenge the U.S. military) affords the United States the opportunity to adopt a balancer-of-last-resort strategy instead

of a Cold War-era extended defense perimeter and forward-deployed forces (intended to keep in check an expansionist Soviet Union). Such a strategy would place greater emphasis on allowing countries to take responsibility for their own security and, if necessary, to build regional security arrangements, even in important areas such as Europe and East Asia. Instead of being a first responder to every crisis and conflict, the U.S. military would intervene only when truly vital U.S. security interests were at stake. That would allow the United States to draw down the large number of forces currently deployed around the world.

Such a posture would still allow the United States to project power if vital U.S. national security interests were at risk, but the requirement to project power would be reduced because other countries would be acting as balancers of power in their respective regions—thereby eliminating the need for the U.S. military to have large numbers of troops stationed in foreign countries. The United States would no longer need permanent bases and large numbers of troops deployed at those bases. The ability to rapidly project power, if necessary, would be facilitated by pre-positioning of supplies and equipment (for example, at Diego Garcia) to allow the U.S. military to respond more rapidly (troops can be deployed faster if their associated equipment does not have to be deployed simultaneously) and by negotiating access and base rights with friendly countries.

Although this is counterintuitive, forward deployment does not significantly enhance the U.S. military's ability to fight wars. The comparative advantage of the U.S. military is airpower, which can be dispatched relatively quickly and at very long ranges. Indeed, during Operation Enduring Freedom in Afghanistan, the U.S. Air Force was able to fly missions from the United States. *Air Force* magazine reported that "a handful of B-2s flew record-setting, 44-hour-long missions directly from Whiteman AFB [Air Force Base], MO to Afghanistan, with recovery at the British atoll of Diego Garcia 2,500 miles to the south in the Indian Ocean. The B-2s that landed at Diego kept their

engines running; fresh crews came aboard and took off for the grueling flight back to Missouri."<sup>27</sup>

If U.S. ground forces were needed to fight a major war, they could be deployed as necessary. It is worth noting that both Operation Enduring Freedom and Operation Iraqi Freedom were conducted without significant forces already deployed in either theater of operations. In the case of Operation Enduring Freedom, the U.S. military had neither troops nor bases adjacent to Afghanistan, yet military operations commenced less than a month after the September 11, 2001, attacks. In the case of Operation Iraqi Freedom, even though the U.S. military had more than 6,000 troops (mostly Air Force) deployed in Saudi Arabia, the Saudi government officially denied the use of its bases to conduct military operations from that country. Instead, the United States used Kuwait as the headquarters and the jumping-off point for military operations. Similarly, the Turkish government prevented the U.S. Army's 4th Infantry Division from using bases in Turkey for military operations in northern Iraq, forcing some 30,000 troops to be transported via ship through the Suez Canal and Red Sea to the Persian Gulf, where they arrived too late to be part of the initial attack against Iraq. Despite those handicaps, U.S. forces swept away the Iraqi military in less than four weeks.

The 31,000 forward-deployed U.S. ground forces<sup>28</sup> in South Korea are insufficient to fight a war. Operation Iraqi Freedom—against a smaller and weaker military foe—required more than 100,000 ground troops to take Baghdad and topple Saddam Hussein (and more to occupy the country afterward). So, if the United States decided to engage in an offensive military operation against North Korea, the 31,000 U.S. troops stationed in South Korea would have to be reinforced—which would take almost as much time as deploying the entire force from scratch if South Korea agreed to be a willing host for staging such an operation. If North Korea (with a nearly one-million-man army) decided to invade South Korea, the defense of South

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Korea would rest primarily with that country's 700,000-man military, not 31,000 U.S. troops. The U.S. military presence in South Korea does not alter the fact that North Korea is believed to have tens of thousands of artillery tubes that can hold the capital city of Seoul hostage. At best, U.S. forces are a tripwire, not a bulwark for defending South Korea.

The post-Cold War threat environment gives the United States the luxury of allowing countries to take responsibility for security in their own neighborhoods, and the economic strength of both Europe and East Asia means that friendly countries in those regions can afford to pay for their own defense rather than rely on the United States to underwrite their security.

In 2003 the U.S. GDP was \$10.9 trillion and total defense expenditures were 3.7 percent of that. In contrast, the combined GDP of the 15 European Union countries in 2003 was \$10.5 trillion, but defense spending was less than 2 percent of GDP.<sup>29</sup> Without a Soviet threat to Europe, the United States does not need to subsidize European defense spending; the European countries have the economic wherewithal to increase military spending, if necessary.

Likewise, America's allies in East Asia are capable of defending themselves. North Korea, one of the world's last bastions of central planning, is an economic basket case. North Korea's GDP in 2003 was \$22 billion compared to \$605 billion for South Korea (more than 27 times North Korea's). South Korea also outspends North Korea on defense nearly three to one, \$14.6 billion vs. \$5.5 billion.<sup>30</sup> Japan's GDP was \$4.34 trillion (more than 195 times larger than North Korea's), and defense spending was \$42.8 billion (almost eight times that of North Korea).<sup>31</sup> So South Korea and Japan certainly have the economic resources to adequately defend themselves against North Korea. They even have the capacity to act as military balancers to China (if China is perceived as a threat). In 2003 China had a GDP of \$1.43 trillion and spent \$22.4 billion on defense.<sup>32</sup>

If the United States adopted a balancer-of-last-resort strategy, virtually all U.S. foreign

military deployments and twice as many U.S.-based troops could be cut (except, for example, U.S. Marine Corps personnel assigned to embassies), assuming a 3:1 rotation ratio.<sup>33</sup> Applying this rule of thumb to the various services would result in the following active duty force size:

- U.S. Army: 189,000 (a 61% reduction), which would result in a force strength of four active duty divisions;
- U.S. Navy: 266,600 (a 31% reduction), which would result in an eight carrier battle group force;
- U.S. Marine Corps: 77,000 (a 56% reduction), which would result in one active Marine Expeditionary Force (i.e., division) and one Marine Expeditionary Brigade; and
- U.S. Air Force: 168,000 (a 54% reduction), which would result in 11 active duty tactical fighter wings and 93 heavy bombers;
- for a total of 699,000 (a 50% reduction).

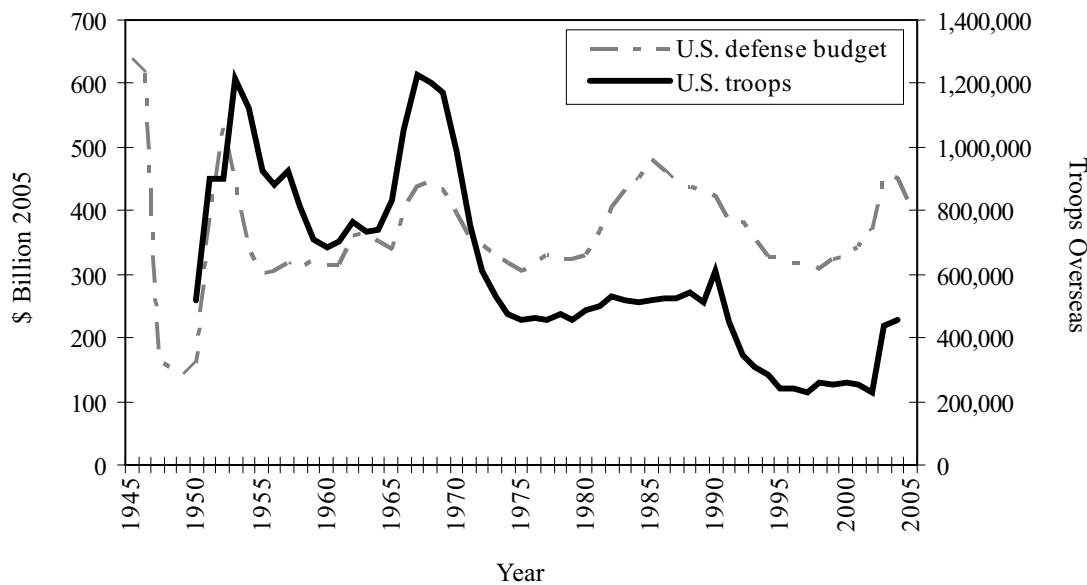
Admittedly, this is a very top-level macro approach that assumes the current active duty force mix is appropriate. Interestingly enough, this top-down approach yields a force structure not markedly different from what the Defense Department thought would be needed to fight a single major regional war:

- four to five Army divisions,
- four to five aircraft carriers,
- four to five Marine expeditionary brigades, and
- 10 Air Force tactical fighter wings and 100 heavy bombers.<sup>34</sup>

Therefore, this approach is a reasonable analytic method for assessing how U.S. forces and force structure could be reduced by adopting a balancer-of-last-resort strategy.<sup>35</sup> As shown in Figure 2, the size of the defense budget correlates rather strongly with the number of U.S. troops deployed overseas.

According to the Defense Department, the FY05 personnel budget for active duty forces is

**Figure 2**  
**U.S. Defense Budget and Troops Overseas**



Sources: Office of the Under Secretary of Defense (Comptroller), “National Defense Budget Estimates for FY 2005,” March 2004, pp. 62–67; Tim Kane, “Global U.S. Troop Deployment, 1950–2003,” Heritage Foundation, CDA 04-11, October 27, 2004, “Appendix: Data and Methodology”; and U.S. Department of Defense, “Active Duty Military Personnel Strengths by Regional Area and by Country,” September 30, 2004.

\$88.3 billion<sup>36</sup> (of a total of \$104.8 billion for military personnel). A 50 percent reduction in active duty forces translates into a reduction of the FY05 active duty military personnel budget to \$44.1 billion and total military personnel spending from \$104.8 billion to \$60.6 billion.<sup>37</sup>

If U.S. active duty forces are substantially reduced, it logically follows that the associated force structure could be similarly reduced, resulting in reduced operations and maintenance (O&M) costs. Using the same percentage reductions applied to active duty forces, the O&M budget for

- the active Army force could be reduced from \$26.1 billion to \$12.8 billion,
- the active Navy force could be reduced from \$29.8 billion to \$20.6 billion,
- the active Marine Corps force could be reduced from \$3.6 billion to \$1.6 billion, and
- the active Air Force could be reduced from \$28.5 billion to \$13.1 billion.<sup>38</sup>

Total savings would be \$39.9 billion, and the total spent on O&M would fall from \$140.6 billion to \$100.7 billion.

The combined savings in military personnel and O&M costs would total \$84 billion, or about 21 percent of the total defense budget. It is worth noting that military personnel and O&M are the two largest portions of the defense budget—26 percent and 35 percent, respectively—so significant reductions in defense spending can be achieved only if those costs are reduced. And the only way to reduce those costs is to downsize active duty military forces.

### Unneeded Weapon Systems

Further savings could be realized by eliminating unneeded weapon systems, which would reduce both the procurement budget (\$74.9 billion) and the research, development, test, and evaluation (RDT&E) budget (\$68.9

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billion). The Pentagon has already canceled two major weapon systems: the Army's Crusader artillery piece and Commanche attack helicopter, with program savings of \$9 billion and more than \$30 billion, respectively.<sup>39</sup> That is a good start. Other weapon systems that could be canceled include the F-22 Raptor, the F/A-18 E/F Super Hornet, the V-22 Osprey, the Virginia-class attack submarine, and the DD(X) destroyer. Missile defense spending could also be scaled back. What follows is a closer look at some of those weapon systems.

### **F-22 Raptor**

The Air Force's F-22 Raptor fighter/bomber was originally designed for combat against advanced, futuristic Soviet tactical fighters that were never built. The F-22 is intended to replace the best air superiority fighter in the world today, the F-15 Eagle (\$55 million unit cost<sup>40</sup> vs. estimated unit cost of \$257 million for the F-22<sup>41</sup>). But the U.S. Air Force has not faced an adversary that can seriously challenge its air superiority. That is evidenced by the fact that the U.S. Air Force flew virtually unopposed in the Gulf War in 1991, in the 1999 air war over Kosovo and Bosnia, enforcing the no-fly zones in northern and southern Iraq from 1991 to 2003, and in Operation Iraqi Freedom. Canceling the F-22 would save \$4.7 billion in procurement and RDT&E in the FY05 budget.<sup>42</sup> Although the Air Force has already spent more than \$36 billion on the F-22, canceling the program would save nearly \$35 billion in future program costs.<sup>43</sup>

Supporters of the F-22 argue that it is needed for the United States to maintain its already large technological lead in tactical combat aircraft. Curiously, the severest threats to U.S. air superiority are Soviet MiG-29s and Su-27s (thought to be comparable to the F-15 Eagle and the F-16 Fighting Falcon), even though the Soviet Union no longer exists and Russia is considered a friend rather than a strategic and military adversary. Even more curious is that the European aerospace industry is seen by some observers as a threat to a U.S. technological lead in advanced fighter aircraft.<sup>44</sup> Ultimately, it is hard to see how

friendly nations represent a threat that warrants development of a new air superiority fighter aircraft.

More recently, an exercise with the Indian Air Force—Cope India—in February 2004 has been cited as evidence of the need to build the F-22. The fact that U.S. F-15s were defeated more than 90 percent of the time in direct combat exercises by their Indian Air Force counterparts led Col. Mike Snodgrass, commander of the 3rd Wing at Elmendorf Air Force Base in Alaska, to remark, "The major takeaway for the Air Force is that our prediction of needing to replace the F-15 with the F/A-22 is proving out as we get smarter and smarter about other [countries'] capabilities around the world and what technology is limited to in the F-15 airframe."<sup>45</sup>

But in that exercise U.S. F-15s were outnumbered three or four to one. That is an unlikely scenario against likely adversaries, which a simple comparison of fighter aircraft inventories makes apparent. According to the IISS, the U.S. Air Force has some 600 F-15 Eagles and some 700 F-16 Fighting Falcons in the active duty inventory (1,300 total tactical fighter aircraft).<sup>46</sup> By comparison, Russia (no longer considered an adversary) has 908 fighter aircraft (fewer than 600 total MiG-29s and Su-27s) in its inventory, China (a possible military competitor) has some 1,000 fighter aircraft (only 100 Su-27s), North Korea (a member of the "axis of evil") has a few more than 500 fighter aircraft (30 MiG-29s), Iran (another member of the "axis of evil") has only 75 fighter aircraft (25 MiG-29s), and Syria (a country classified as a rogue state) has 300 fighter aircraft (42 MiG-29s and 8 Su-27s).<sup>47</sup> So even if it is possible in an exercise for relatively well-trained Indian pilots outnumbering U.S. fighters three or four to one<sup>48</sup> to achieve high tactical success, it is difficult to see how real adversaries would be able to similarly outnumber U.S. aircraft with fighters that are the equal of the F-15 and F-16.

Admittedly, the U.S. Air Force could find itself outnumbered if we were fighting a multiple-front war against all of the above countries simultaneously, but a balancer-of-last-



resort strategy means that—unless directly attacked—the U.S. military would be engaged in fewer conflicts because other countries would be responsible for their own defense instead of depending on the United States.

Proponents of the F-22 also argue that current fighter aircraft may be more vulnerable to ground-based air defenses. Loren Thompson at the Lexington Institute points out that the “U.S. B-2 stealth bomber had to fly long-distance missions from Missouri to bomb Serbia during the Balkan air war in 1999 partly because commanders doubted the ability of non-stealthy planes like the F-15E fighter-bomber to safely penetrate Serbia [*sic*] air defenses.”<sup>49</sup> But that is as much an argument for long-range precision-strike capability (which may be more cost-effective) to neutralize ground-based air defenses as it is for a new aircraft capable of penetrating such defenses. And at least in the cases of the Balkan air war and the enforcement of no-fly zones in Iraq, air defenses against U.S. aircraft were not effective because both the Serbians and the Iraqis chose to turn their tracking radars off (to avoid being detected and attacked by radar-seeking missiles), which meant they would either shoot blindly (with very little chance of hitting an aircraft) or not at all. Of course, if enemy air defense radars are not turned on, that means that U.S. radar-seeking missiles are ineffective—which reinforces the need for long-range precision-strike capability that does not depend on radar emissions rather than new fighter aircraft armed with anti-radar missiles.<sup>50</sup>

A more cost-effective approach to long-range precision strike than building a new and expensive tactical fighter was demonstrated in Afghanistan. The venerable B-52 heavy bomber (the H-model in the current inventory was produced in the early 1960s) has a 70,000-pound weapons payload, can carry 12 precision-guided joint direct attack munitions (JDAMs) on external pylons, and has an unrefueled range of 8,800 miles.<sup>51</sup> By comparison, the F-22 is expected to be able to carry only two JDAMs.<sup>52</sup> The F-15E Strike Eagle that can carry up to 23,000 pounds of

payload<sup>53</sup> and has a maximum range of 2,400 miles<sup>54</sup> is a good modern plane to compare with heavy bombers. Heavy bombers with long range can also loiter over the battlefield for longer periods of time, waiting for targets to be identified or emerge. Shorter-range tactical fighter aircraft are significantly less capable. For example, during Operation Enduring Freedom, “many [tactical fighter] aircraft were sent to areas where targets were expected to pop up but did not. This caused quite a few Navy aircraft to return with their full load of weapons.”<sup>55</sup>

### **F/A-18E/F Super Hornet**

The F/A-18E/F Super Hornet is intended to replace three existing aircraft: the F-14 Tomcat air superiority fighter, the now-retired A-6 Intruder attack aircraft, and the F-18C/D multimission fighter. However, the Super Hornet’s capabilities as a replacement for the F-14 and F-18C/D as a fighter were called into question by a Navy operational test report that concluded that the F-18E/F offered only a “marginal” improvement over existing Navy tactical fighter aircraft.<sup>56</sup> In 1996 the General Accounting Office stated that “current F/A-18s are not as deficient as the Navy reported and that the F/A-18E/F would provide only a marginal improvement in capability of the older F/A-18s at significantly greater cost.”<sup>57</sup> According to the GAO, the unit cost for the F/A-18C/D Hornet was \$28 million (in FY96 dollars) compared to \$53 million for the Super Hornet, and “the Navy could save almost \$17 billion (FY96 dollars) in recurring flyaway costs by buying 660 new F/A-18C/D model aircraft instead of 660 F/A-18E/F model aircraft.”<sup>58</sup> Those estimates now seem conservative because the unit cost for the F/A-18E/F now stands at \$95 million.<sup>59</sup>

Compared with the A-6 Intruder, whose payload capabilities were exceeded only by land-based bombers such as the B-1 and B-52,<sup>60</sup> the F/A-18E/F’s range and payload are much less. For example, the Intruder was capable of delivering more than 10,000 pounds of payload at a range of 450 miles using two 300-

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**Canceling the V-22 would save \$1.4 billion in procurement and \$395 million in RDT&E costs in the FY05 defense budget and \$45.8 billion in future program costs.**

gallon external fuel tanks.<sup>61</sup> For the same range (and using two 480-gallon external fuel tanks), an F/A-18E/F Super Hornet can carry only four 1,000-pound bombs.<sup>62</sup>

The Navy's F/A-18 E/F Super Hornet is another unneeded tactical aircraft because, just as the Air Force's air-to-air threat environment is relatively benign, so is the Navy's. According to the Office of Naval Intelligence, the F/A-18C/D Hornet is superior to China's Su-27.<sup>63</sup> And the United States has other advantages over potential adversaries, such as pilot training (for example, according to IISS, F-14 pilots average 302 flying hours per year and F-18 pilots average 372 flying hours compared with Chinese Su-27 pilots who average 180 hours and North Korean pilots who average 20 hours or less),<sup>64</sup> aircraft maintenance, and airborne fighter control.

The F/A-18E/F entered operational service in 1999. Boeing is currently delivering 222 Super Hornets under a five-year contract with the U.S. Navy. Boeing and the U.S. Navy signed a second multiyear contract in December 2003 (the contract runs from 2005 to 2009) for another 210 F/A-18E/Fs. The U.S. Navy plans to buy a minimum of 548 (and perhaps as many as 1,000) F/A-18E/Fs through 2010. Canceling the Super Hornet immediately would save \$3.1 billion in procurement and RDT&E in the FY05 budget alone.<sup>65</sup> Future program costs of \$20 billion would be saved if the second Boeing contract were terminated and no further Super Hornets were purchased.

#### **V-22 Osprey**

The V-22 Osprey<sup>66</sup> is a tilt-rotor aircraft that takes off and lands vertically like a helicopter but flies like an airplane by tilting its wing-mounted rotors to become propellers. When the V-22 program entered full-scale development in 1986, the armed forces planned to build 923 aircraft, at an average unit cost of \$24 million.<sup>67</sup> The current program plan calls for building 458 Ospreys at a total cost of \$48 billion, or \$105 million each.<sup>68</sup> In other words, the military will end up with fewer than half the aircraft at more than four times the origi-

nal unit cost. Canceling the V-22 would save \$1.4 billion in procurement and \$395 million in RDT&E costs in the FY05 defense budget<sup>69</sup> and \$45.8 billion in future program costs.

Supporters of the V-22 argue that it has the operational flexibility of a helicopter but is twice as fast, can carry more troops, and has five times the range. And unlike helicopters, the V-22 can fly to its area of deployment and does not have to be transported over long distances, via either ship or cargo aircraft. Critics contend that the Osprey is prohibitively expensive and unsafe (the V-22 program has experienced four crashes, two of which killed 23 Marines). Moreover, they argue that existing helicopters, which the services are already buying, or even off-the-shelf helicopter alternatives, can accomplish the same missions at considerably lower cost.

The V-22 is more capable than helicopters in terms of speed, range, and payload,<sup>70</sup> but its advantages are not as great as advocates claim and it costs four to five times more than available helicopters. For example, the maximum speed of the V-22 is 316 miles per hour in airplane mode and 115 mph in helicopter mode. The helicopters the V-22 is intended to replace—the CH-60, CH-46, and CH-53—have maximum speeds of 185 mph, 167 mph, and 195 mph, respectively. But if the V-22 has to carry cargo on an external hook, it must keep its rotors upright and fly in helicopter rather than airplane mode, thus eliminating its speed advantages over helicopters.

The V-22 has greater range than existing helicopters, as well as in-flight aerial refueling capability, but so does the CH-60. The V-22 does have greater payload capability than the helicopters. Table 1 summarizes the capabilities of the V-22 and compares them with those of helicopters, including cost comparisons that show how many helicopters could be purchased for the same program cost as the V-22 and the number of helicopters required to achieve the same lift capacity as the V-22 program. If the money spent on the V-22 program were used to procure helicopters, substantially more helicopters could be purchased, and they would significantly

**Table 1  
Comparison of V-22 and Helicopters**

	Number (USMC)	Unit Cost (\$ million)	Max. Speed (knots)	Range (nautical mi.)	Payload (pounds)
V-22 Osprey (projected)	458	\$104.9	275	515	10,000

V-22 is the proposed replacement for these helicopters no longer in production:

CH-46 Sea Knight	239		180	132	5,000
CH-53 Super Stallion	155		160	578	8,000

Helicopters in production as alternatives to the V-22:

CH/MH-60S Knighthawk		\$25.2	145	380	4,000
S/H-92 Superhawk*		\$16.0	151	475	10,000
EH-101**		\$25.0	150	750	10,000

For the V-22 total program cost (\$48 billion), which provides a total lift capacity of 4.6 million pounds, the number of helicopters that could be procured:

CH/MH-60S Knighthawk	1,906 = total lift capacity of 7.6 million pounds
S/H-92 Superhawk	3,002 = total lift capacity of 30 million pounds
EH-101	1,921 = total lift capacity of 19 million pounds

Number of helicopters required to equal V-22 program total lift capacity of 4.6 million pounds:

CH/MH-60S Knighthawk	1,150 = \$29 billion total program cost
S/H-92 Superhawk	460 = \$7.4 billion total program cost
EH-101	460 = \$11.5 billion total program cost

\* S/H-92 is a Sikorsky helicopter not built under military contract but designed to be used by the military as an off-the-shelf acquisition alternative. Its \$16.0 million unit cost is based on a civilian helicopter; a military version might cost several million more.

\*\* EH-101 is a military utility medium-lift helicopter built by AgustaWestland that has a variety of configurations for different missions and is in service in many countries. The \$25.0 million unit cost is based on procurement of several hundred helicopters.

exceed the total lift capacity of the V-22 program. The cost of helicopters for the equivalent total lift capacity of the V-22 program is \$19 billion, more or less.

If carrying a payload at maximum speed to maximum range is the only or most critical mission, then the V-22 would seem to be a more capable choice than helicopters. But the ability to project power from a long range

or far inland is more of a convenient justification for the V-22 than a real operational requirement. Most Marine Corps ship-to-shore operations occur at distances far shorter than the maximum range of the V-22. And long-range inland operations would still require support from slower helicopters because the V-22 cannot carry enough heavy equipment or enough supplies to support

**Instead of spending nearly \$50 billion on the V-22, equivalent lift capacity could be procured for significantly less by increasing the number of MH-60s.**

**Canceling the Virginia-class submarine program would save \$2.6 billion in procurement and RDT&E costs in the FY05 budget and approximately \$69.2 billion in future costs.**

the troops it would be transporting.

Moreover, the V-22 appears to be more susceptible than helicopters to vortex ring state—a phenomenon common to all rotary aircraft—which causes the equivalent of stalling in a conventional fixed-wing aircraft and increases the likelihood of a catastrophic crash.<sup>71</sup> Another potential problem for the V-22 is that, if the rotors become stuck in the forward position (that is, while flying horizontally like an airplane), the aircraft cannot land because the rotor blades extend well below the fuselage.<sup>72</sup>

Instead of spending nearly \$50 billion on the V-22, equivalent lift capacity could be procured for significantly less by increasing the number of MH-60s (a Navy variant of the Army Blackhawk helicopter). Other helicopter alternatives include the Sikorsky S-92, a civilian helicopter that can be adapted for military use, and the AgustaWestland EH-101, a medium-lift helicopter in service in a number of countries.

#### **Virginia-Class Attack Submarines**

During the Cold War, U.S. submarines were developed to counter two threats: a land war in Europe and Soviet nuclear ballistic missile submarines (SSBNs) that could attack the United States with nuclear weapons. The United States feared that technologically advanced Soviet attack submarines could attack U.S. warships and convoys supporting a European war and that they could mount an offensive nuclear strike. Accordingly, the United States built quiet, nuclear-powered attack submarines that could hunt the Soviet submarines in the event of either scenario.<sup>73</sup> But with the demise of the Soviet Union and closer relations with Russia, we no longer need the ability to perform those missions. And even if China is seen as a potential future threat, it has only one deployed SSBN and five Han-class nuclear attack submarines (compared to the U.S. Navy's 54 nuclear attack submarines).<sup>74</sup>

Moreover, the new Virginia-class submarine is probably only marginally more capable than the current Los Angeles-class and Seawolf-class submarines. For example, all

three have the same maximum speed of more than 25 knots. The Los Angeles class and Virginia class both have operating depths of more than 800 feet compared to about 1,600 feet for the Seawolf class. The Seawolf class can carry 50 missiles or torpedoes compared to 38 for the Virginia class and 37 for the Los Angeles class. The Virginia class has as many torpedo tubes as the Los Angeles class (4) but only half as many as the Seawolf class (8). The Virginia class and the Los Angeles class both have 12 vertical launch system cells compared to none on the Seawolf class.<sup>75</sup>

Nonetheless, the Navy is currently planning to buy 30 Virginia-class submarines costing a total of \$83.2 billion (\$2.8 billion each).<sup>76</sup> Canceling the Virginia-class submarine program would save \$2.6 billion in procurement and RDT&E costs in the FY05 budget.<sup>77</sup> Five submarines are already under contract, so terminating the program would save approximately \$69.2 billion in future costs.

The Joint Chiefs of Staff Submarine Force Structure Study, designed to assess the military's need for submarines, recommended a minimum fleet of 55 attack submarines, an optimal force structure of 68 attack submarines by 2015 (18 of which would be Virginia-class submarines), and a total of 76 attack submarines by 2025.<sup>78</sup> By contrast, a 2002 Congressional Budget Office study examined four options for the Navy to increase the mission capability of the attack submarine force without building any new submarines:

- Converting four Trident ballistic missile submarines to a guided-missile configuration (SSGN) for nonnuclear missions;
- Using dual crews, similar to what is done on Trident submarines;
- Using a three-crew rotation between two submarines; and
- Basing more attack submarines in Guam (in addition to what the Navy had already planned).

According to the CBO analysis, all four options “would enable a force of 55 SSNs [nuclear-powered attack submarines] to pro-

vide the same number of mission days by 2015 and 2025 that 68 or 76 attack submarines, respectively, would provide under current policies—at substantially lower cost than building more submarines.”<sup>79</sup>

Given the current threat environment, it is not necessary to spend more than \$83 billion to build the Virginia-class submarine to replace an already capable U.S. Navy attack submarine fleet.

### Total Defense Budget Savings

Canceling the F-22 Raptor, the F/A-18E/F Super Hornet, the V-22 Osprey, and the Virginia-class attack submarines would save a total of \$12.2 billion in procurement and RDT&E costs in the FY05 budget (and a total of \$170 billion in future program costs). Combining those savings with the savings on military personnel and O&M previously discussed yields a revised FY05 defense budget of \$305.8 billion, a 21 percent reduction. Of course, it is not realistic that the defense budget could be reduced immediately. But the budget could be reduced to this proposed level by increments over a period of five years.

Further reductions could be realized by analyzing the need for other weapon systems. For example, the Defense Department could do the following:

- Reduce the number of C-17 transport aircraft. Although a balancer-of-last-resort strategy would require airlift capacity to respond to a crisis if necessary, the total number of aircraft would be fewer than needed to support the current U.S. interventionist foreign policy.
- Retire B-1 bombers, originally designed to evade Soviet air defenses. The B-2 is a more capable strategic nuclear bomber, and the venerable B-52 is a more efficient, (i.e., greater payload) long-range precision weapons delivery platform.
- Downsize the Trident ballistic missile submarine fleet as part of reducing the strategic nuclear arsenal per the SORT agreement with Russia.
- Cancel new aircraft carriers and the sur-

face combatants (e.g., DD(X) destroyers)<sup>80</sup> required for a carrier battle group. A balancer-of-last-resort strategy would also allow for a reduction in the number of deployed carrier battle groups from the current fleet size of 12 groups.

- Scale back the missile defense program. A balancer-of-last-resort strategy would require theater missile defense systems that could be deployed with forces to respond to crises but would not require permanently deployed systems in foreign countries. A limited national missile defense system to protect the United States (largely as an insurance policy against small attacks or accidental or unauthorized launches) would also be appropriate for a balancer-of-last-resort strategy. But any missile defense systems must be thoroughly and realistically tested (as should any weapon system) before a procurement and deployment decision is made.

This top-down, macrolevel analysis should be viewed as just one way to show how the defense budget could be reduced if the United States adopted a balancer-of-last-resort strategy. A “bottom-up” approach based on sizing the force against specific military threats and war-fighting requirements is another way of looking at things. Such an analysis was done by Ivan Eland in *Putting “Defense” Back into U.S. Defense Policy: Rethinking U.S. Security in the Post-Cold War World* using a requirement to fight a single major regional conflict, which yielded the following force structure:

- Five active Army divisions and 39 National Guard combat brigades,
- Four active Air Force wings and nine reserve wings with 187 heavy bombers,
- A 200-ship Navy with four active aircraft carriers and two reserve aircraft carriers (plus the same number of carrier air wings) and 25 attack submarines, and
- One active Marine Corps division and one reserve division.<sup>81</sup>

Although that analysis was done more than

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**A balancer-of-last-resort strategy requires a smaller defense budget—perhaps as small as \$196.7 billion but certainly no larger than \$305.8 billion.**

three years ago, the conventional military threat environment has not significantly changed during the intervening years,<sup>82</sup> so the results are still relevant.

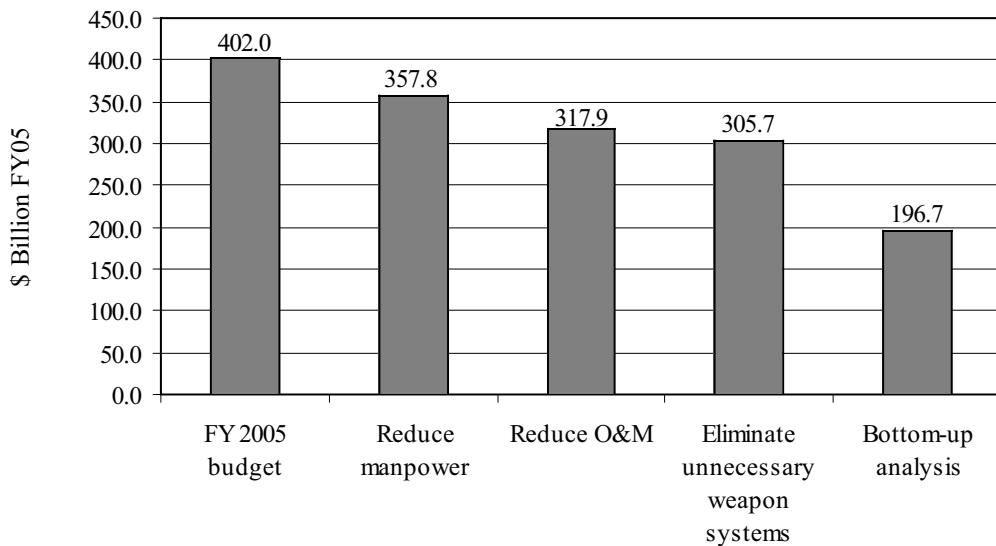
The cost for the above force structure was \$183.9 billion<sup>83</sup> (in 2002 dollars), which was 40 percent less than the FY01 defense budget of \$303 billion (in 2002 dollars). If a 40 percent reduction factor were applied to the FY05 defense budget, the resulting savings would be \$160.7 billion and the defense budget would be only \$241 billion. If the proposed force structure and resulting defense budget were adjusted from 2002 dollars to 2005 dollars, the FY05 defense budget would be \$196.7 billion.<sup>84</sup> The point is that a balancer-of-last-resort strategy requires a smaller, not a larger, defense budget—perhaps as small as \$196.7 billion but certainly no larger than \$305.8 billion (Figure 3).

### **Weapons and Skills for the War on Terrorism**

The defense budget can be reduced because the nation-state threat environment is markedly different than it was during the

Cold War, and also because a larger military is not necessary to combat the terrorist threat. It is important to remember that the large U.S. military with its forward-deployed global presence was not an effective defense against 19 hijackers. And the shorthand phrase “war on terrorism” is misleading. First, as the National Commission on Terrorist Attacks upon the United States (also known as the 9/11 Commission) points out: “The enemy is not just ‘terrorism,’ some generic evil. This vagueness blurs the strategy. The catastrophic threat at this moment in history is more specific. It is the threat posed by Islamist terrorism—especially the al Qaeda network, its affiliates, and its ideology.”<sup>85</sup> Second, the term “war” implies the use of military force as the primary instrument of policy for waging the fight against terrorism. But traditional military operations should be the exception rather than the rule in the conflict with Al Qaeda. Al Qaeda is not an army that wears uniforms and operates in a specific geographic region. Rather, it is a loosely connected and decentralized network with cells and operatives in 60 countries. So President Bush is right: “We’ll have to hunt them down one at a time.”<sup>86</sup>

**Figure 3  
Balancer-of-Last-Resort Defense Budget**



Although President Bush is also right to be skeptical about treating terrorism “as a crime, a problem to be solved mainly with law enforcement and indictments,”<sup>87</sup> the reality is that the arduous task of dismantling and degrading the network will largely be the task of unprecedented international intelligence and law enforcement cooperation. The military aspects of the war on terrorism will largely be the work of special forces in discrete operations against specific targets rather than large-scale military operations.

Instead of spending hundreds of billions of dollars to maintain the current size of the armed forces and on weapons such as the F-22, the F/A-18E/F, the V-22, and Virginia-class submarines, the United States could better fight the war on terrorism by investing in better intelligence gathering, unmanned aerial vehicles (UAVs), special operations forces (SOF), and language skills.

### **Intelligence Gathering**

Better gathering of intelligence on the terrorist threat is critical to fighting the war on terrorism.<sup>88</sup> So spending on intelligence deserves greater attention. But according to the 9/11 Commission, “Even the most basic information about how much money is actually allocated to or within the intelligence community and most of its key components is shrouded from public view.”<sup>89</sup>

Although the budgets for the 15 agencies with intelligence-gathering and analysis responsibilities<sup>90</sup> are veiled in secrecy, the best estimate is that the total spent on intelligence is about \$40 billion.<sup>91</sup> As is the case with the defense budget, it is not necessarily a question of needing to spend more money on intelligence gathering and analysis but of how to best allocate spending and resources. For example, about 85 percent of the estimated \$40 billion spent on intelligence activities goes to the Defense Department, only about 10 percent is for the CIA, and the remainder is spread among the other intelligence agencies. If the war on terrorism is not primarily a military war, perhaps the intelligence budget could be reallocated between the Defense

Department and other intelligence agencies—with less emphasis on nation-state military threats and more emphasis on terrorist threats to the United States—since the conventional military threat environment is less severe than during the Cold War.

Regardless of whether \$40 billion is the right amount of intelligence spending and how that money is allocated, the war on terrorism requires the following:

- Less emphasis on spy satellites as a primary means of intelligence gathering. That does not mean abandoning the use of satellite imagery. Rather, it means recognizing that spy satellite images may have been an excellent way to monitor stationary targets such as missile silos or easily recognizable military equipment, such as tanks and aircraft, but may not be as capable for locating and tracking individual terrorists.
- Recognizing the problems involved with electronic eavesdropping. According to Loren Thompson at the Lexington Institute, “The enemy has learned how to hide a lot of its transmissions from electronic eavesdropping satellites.”<sup>92</sup> The problem of finding and successfully monitoring the right conversations is further compounded by being unable to sift through the sheer volume of terrorist chatter to determine what bits of information are useful.
- Greater emphasis on human intelligence gathering. Spies on the ground are needed to supplement—and sometimes confirm or refute—what satellite images, electronic eavesdropping, interrogations of captured Al Qaeda operatives, hard drives on confiscated computers, and other sources are indicating about the terrorist threat. Analysis and interpretation need to be backed up with as much “inside information” as possible. That is perhaps the most critical missing piece in the intelligence puzzle in terms of anticipating future terrorist attacks. Ideally, the United States needs “moles” inside Al

**The United States could better fight the war on terrorism by investing in better intelligence gathering, unmanned aerial vehicles, special operations forces, and language skills.**

**One can only wonder what might have happened if the spy Predator that took pictures of a tall man believed to be Osama bin Laden in the fall of 2000 had instead been an armed Predator capable of immediately striking the target.**

Qaeda, but it will be a difficult task (and likely take many years) to place someone inside Al Qaeda who is a believable radical Islamic extremist and will be trusted with the kind of information U.S. intelligence needs. The task is made even more difficult by the distributed and cellular structure of Al Qaeda and the fact that the radical Islamic ideology that fuels the terrorist threat to America has expanded beyond the Al Qaeda structure into the larger Muslim world.

### **UAVs**

Unmanned aerial vehicles are not new. According to the Defense Department, “The U.S. military has a long and continuous history of involvement with UAVs, stretching back to the Sperry/Curtiss N-9 of 1917” and the 3,435 UAV sorties during the Vietnam conflict.<sup>93</sup> UAVs became better known when they were used in the Balkans in the mid-1990s and then in Iraq, first to provide aerial surveillance and later to designate targets for laser-guided bombs. During Operation Enduring Freedom in Afghanistan, UAVs moved beyond playing a supporting role for combat aircraft and became offensive weapons when armed with Hellfire missiles (a dozen UAVs launched a total of 115 missiles in Afghanistan).<sup>94</sup>

The potential utility of UAVs for the war on terrorism has been demonstrated in Afghanistan and Yemen. In February 2002 a Predator UAV (armed with Hellfire missiles and operated by the CIA) attacked a convoy and killed several people, including a suspected Al Qaeda leader in the Tora Bora region of eastern Afghanistan.<sup>95</sup> In November 2002 a Predator UAV in Yemen destroyed a car containing six Al Qaeda suspects, including Abu Ali al-Harithi, one of the suspected planners of the attack on the USS *Cole* in October 2000.<sup>96</sup>

If parts of the war on terrorism are to be fought in places such as Yemen, Sudan, Somalia, and Pakistan—especially if it is not possible for U.S. ground troops to operate in those countries—UAVs could be key assets for finding and targeting Al Qaeda operatives because of those vehicles’ ability to cover large

swaths of land for extended periods of time in search of targets. For example, a Predator UAV has a combat radius of 400 nautical miles and can carry a maximum payload of 450 pounds for more than 24 hours. According to the Defense Department, “Due to its vantage point, one unmanned sentry equipped with automated cuing algorithms and multiple sensors could survey the same area as ten (or more) human sentries.”<sup>97</sup> The Congressional Budget Office states that UAVs can provide “their users with sustained, nearly instantaneous video and radar images of an area without putting human lives at risk.”<sup>98</sup>

Armed UAVs offer a cost-effective alternative to deploying troops on the ground or having to call in manned aircraft to perform combat missions against identified terrorist targets. According to Dyke Weatherington, deputy of the UAV Planning Task Force in the Office of the Secretary of Defense, without armed UAVs “we either couldn’t get strikes to the target in time or the manned aircraft couldn’t find [the] target the UAV had found.”<sup>99</sup> One can only wonder what might have happened if the spy Predator that took pictures of a tall man in white robes—believed by many intelligence analysts to be Osama bin Laden—surrounded by a group of people in the fall of 2000 had instead been an armed Predator capable of immediately striking the target. According to retired Gen. Wayne Downing: “We were not prepared to take the military action necessary. . . . We should have had strike forces prepared to go in and react to this intelligence, certainly cruise missiles.”<sup>100</sup>

In addition to their utility, what makes UAVs particularly attractive is their relatively low cost—especially when compared with manned aircraft. Developmental costs for UAVs are actually about the same as for a similar manned aircraft because “the engineering required to get to first flight is driven more by aerodynamics (i.e., flight control software development) and propulsion than by human factors and avionics.”<sup>101</sup> But procurement costs for UAVs are substantially less than for manned aircraft. For example, in FY03, 25 Predator UAVs were purchased for \$139.2 million (\$5.6 million each); in



FY04, 16 Predators were purchased for \$210.1 million (\$13.1 million each); and the FY05 budget is for nine Predators to be purchased for \$146.6 million (\$16.3 million each)<sup>102</sup>—or an average unit cost of \$9.9 million over three years (the increases in per unit costs reflect arming more Predators with Hellfire missiles). Although UAVs probably will not completely replace manned aircraft, it's worth noting that a Predator UAV is a fraction of the cost of tactical fighter aircraft such as the F-15 or F-22, with unit costs of \$55 million and \$257 million. Operations and maintenance costs for UAVs are also expected to be less than for manned aircraft.

So the \$10 billion in planned spending on UAVs in the next decade (compared to just \$3 billion in the 1990s) is a smart investment in the war on terrorism. And even doubling the budget to \$2 billion a year on average over the next 10 years would make sense and would represent less than 1 percent of an annual defense budget based on a balancer-of-last-resort strategy. The bottom line is that UAVs are a very low-cost weapon that could yield an extremely high payoff in the war on terrorism.<sup>103</sup>

### **Special Operations Forces (SOF)**

The Al Qaeda terrorist network is a diffuse target—individuals and cells operating in 60 or more countries. U.S. special operations forces—units such as Navy SEALs (SEa-Air-Land) teams and Army Green Berets, Rangers, and Delta Force—are ideally suited for this kind of mission. Indeed, counterterrorism is the number-one mission of SOF and they are “specifically organized, trained, and equipped to conduct covert, clandestine, or discreet CT [counterterrorism] missions in hostile, denied, or politically sensitive environments,” including “intelligence operations, attacks against terrorist networks and infrastructures, hostage rescue, [and] recovery of sensitive material from terrorist organizations.”<sup>104</sup>

Secretary of Defense Donald Rumsfeld has been a strong advocate of using SOF against terrorist targets. In August 2002 he issued a classified memo to U.S. Special Operations Command (SOCOM) to capture or kill Osama bin Laden and other Al Qaeda lead-

ers.<sup>105</sup> Rumsfeld has also proposed sending SOF into Somalia and Lebanon's Bekaa Valley because those lawless areas are thought to be places where terrorists can hide and be safe from U.S. intervention.

Although there is no question that SOF have an important role to play in the war on terrorism, at issue is whether the Department of Defense and SOCOM should direct paramilitary operations against terrorist targets—which was the recommendation of the 9/11 Commission: “Lead responsibility for directing and executing paramilitary operations, whether clandestine or covert, should shift to the Defense Department. There it should be consolidated with the capabilities for training, direction, and execution of such operations already being developed in the Special Operations Command.”<sup>106</sup> The concern is that covert operations run by the CIA (many of which have had a military component—most notably Operation Phoenix in Vietnam) require a presidential finding and congressional reporting, but covert military operations are not governed by the same strict rules.<sup>107</sup> For example, some Pentagon officials believe covert military operations can be justified as “preparation of the battlefield” in a campaign against terrorism that knows no boundaries.<sup>108</sup> The possibility of unchecked clandestine military operations raises the specter of Oliver North and the guns-for-hostages Iran-Contra scandal and has led some members of Congress to consider a requirement for a presidential finding for covert SOF in countries where the U.S. role is not publicly acknowledged.<sup>109</sup>

Clearly, the issue of how covert military operations are authorized and controlled must be resolved. But there should be little doubt about the utility of using SOF—including covert operations—as an effective way to capture or kill terrorists. Like that of UAVs, the cost of SOF is relatively low. The FY05 budget request for SOCOM is \$6.5 billion,<sup>110</sup> or only about 1.6 percent of the total defense budget. Like that for UAVs, the budget for special operations forces could be significantly increased without adversely affecting the overall defense budget. Given the

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**Language skills  
for the war on  
terrorism are in  
short supply.**

importance and unique capabilities of SOF relative to the regular military in the war on terrorism, it would make sense to increase funding for special forces—perhaps doubling the budget for SOCOM.

**Language Skills**

In the timeless treatise of strategic thinking, *The Art of War*, Chinese military theorist Sun Tzu stressed the importance of knowing the enemy:

Knowing the other and knowing oneself,  
In one hundred battles no danger.  
Not knowing the other and knowing one  
self,  
One victory for one loss.  
Not knowing the other and not knowing  
oneself,  
In every battle certain defeat.<sup>111</sup>

To truly know the enemy, the United States must train a cadre of experts to teach and analyze the relevant languages of the Muslim world—Arabic, Uzbek, Pashtu, Urdu, Farsi (Persian), Dari (the Afghan dialect of Farsi), and Malay, to name a few. But according to a GAO report, in FY01 only half of the Army’s 84 positions for Arabic translators and interpreters were filled, and there were 27 unfilled positions (of a total of 40) for Farsi.<sup>112</sup> Under Secretary of Defense for Personnel and Readiness David Chu admits that the Defense Department is having a “very difficult time . . . training and keeping on active duty sufficient numbers of linguists.”<sup>113</sup> As of March 2004, FBI director Robert Mueller reported that the bureau had only 24 Arabic-speaking agents (of more than 12,000 special agents).<sup>114</sup> At the State Department, there are five linguists fluent enough to speak on Arab television (of 9,000 Foreign Service and 6,500 civil service employees).<sup>115</sup>

According to the GAO, the Pentagon estimates that it currently spends up to \$250 million per year to meet its foreign language needs.<sup>116</sup> The GAO did not indicate whether the \$250 million (about 6/100 of 1 percent of the FY05 defense budget) was adequate.

Whether the Defense Department (as well as other government agencies such as the CIA and FBI) is spending enough, this much is certain: language skills for the war on terrorism are in short supply. One result is that “FBI shortages of linguists have resulted in thousands of hours of audiotapes and pages of written material not being reviewed or translated in a timely manner.”<sup>117</sup> The supply of linguists will not be increased easily or quickly.

The Defense Language Institute (DLI) in Monterey, California, is the largest language school in the world and provides 85 percent of the language training for the federal government. In 2001 DLI graduated 2,083 students in basic language training in 20 languages. Such training lasts from 25 to 63 weeks depending on the difficulty of the language. Two of the four most difficult languages for Americans to learn are Arabic and Farsi. Thus, the time required to teach native English speakers even the basics is relatively long.

Finding instructors and creating course materials are also challenges. According to DLI chancellor Ray Clifford, “The faculty we need to find are not being produced for us by U.S. colleges and universities.”<sup>118</sup> And if instructors can be found, they often have to develop coursework from scratch. According to Neil Granoien, a former Russian instructor and dean of DLI’s Korean school: “People have been writing Spanish grammar for a couple hundred years, French even longer. If you take a language like Uzbek, there’s much work to be done, or [Pashto], for example, where there’s very little work that’s been done, and most of that was done in Victoria’s [Queen Victoria in the 19th century] reign.”<sup>119</sup>

Although so-called heritage speakers, who are usually recruited from places with large Middle Eastern immigrant communities, are a logical choice for linguists, there are potential risks that cannot be ignored and must be properly managed. For example, two Arabic translators hired to assist with interrogations of prisoners at the U.S. base at Guantanamo Bay in Cuba were arrested in July 2003 and October 2003. Some observers believe the Pentagon may have relaxed its standards—

both translators received only “interim” clearances, and one had been the subject of a previous surveillance<sup>120</sup>—in its rush to hire Arabic speakers after September 11. The charges against one of the translators, Senior Airman Ahmad al-Halabi, have been dropped. But Ahmed Fathy Mehalba still faces prosecution in a federal court in Boston. Whatever the outcome of the second case, prudence dictates thorough screening of heritage speakers.

Finally, the military’s own policies may hinder finding and retaining qualified linguists. For example, over a two-year period, 37 linguists from DLI were discharged for being gay under the military’s “don’t ask, don’t tell” policy. One was Cathleen Glover, who had mastered Arabic but could no longer cope with leading a double life and voluntarily admitted to her homosexuality. Another was Alastair Gamble, also an Arabic linguist, who was caught with his boyfriend in a surprise barracks inspection.<sup>121</sup> The point here is not whether the “don’t ask, don’t tell” policy is right or wrong (or whether the military should lift its ban on allowing homosexuals to serve) but simply to show how it has affected, and could continue to affect, the military’s ability to fill the need for Arabic and other language speakers needed for the war on terrorism.

## Conclusion

Ever-increasing defense spending is being justified as necessary to fight the war on terrorism. But the war on terrorism is not primarily a conventional military war to be fought with tanks, planes, and ships. And the military threat posed by nation-states to the United States does not warrant maintaining a large, forward-deployed military presence around the world. Indeed, if the terrorist threat of Al Qaeda and other radical Islamists is the major threat to U.S. security, even the Bush administration admits the relationship between American global interventionism and retaliatory acts of terrorism against the United States. According to Deputy Defense Secretary Paul Wolfowitz, U.S. forces stationed in Saudi

Arabia after the 1991 Gulf War were “part of the containment policy [of Iraq] that has been Osama bin Laden’s principal recruiting device, even more than the other grievances he cites.”<sup>122</sup>

Therefore, a better approach to national security policy would be for the United States to adopt a less interventionist policy abroad and to pull back from the Cold War-era extended security perimeter (with its attendant military commitments overseas). That approach recognizes that not every conflict or instability in the world automatically jeopardizes U.S. national security. It also recognizes that many of the problems plaguing the world, such as civil wars and ethnic strife, are largely impervious to external solution (even by a country as powerful as the United States).

Instead of being the balancer of power in disparate regions around the world, the United States should adopt a balancer-of-last-resort strategy and allow countries to establish their own balance-of-power arrangements (as the dominant military power in the world, the United States could always step in as a balancer of last resort if a serious imbalance that jeopardized vital U.S. national security interests were to develop). Instead of viewing all crises and conflicts around the world as vitally important, the United States would be able to distinguish between those that demand its attention and those that do not threaten U.S. national security.

## Notes

1. H. R. 4613, Department of Defense Appropriations Act, 2005. See also Terence Hunt, “Bush Signs Bill with \$25B More for Wars,” Associated Press, August 5, 2004.
2. Jonathan Weisman, “President Requests More War Funding,” *Washington Post*, February 15, 2005, p. A4.
3. U.S. Department of Defense, “Fiscal 2005 Department of Defense Budget Release,” February 2, 2004, [www.defenselink.mil/releases/2004/nr20040202-0301.html](http://www.defenselink.mil/releases/2004/nr20040202-0301.html). Note, however, that the budget figure in Office of the Under Secretary of Defense (Comptroller), “National Defense Budget Estimates for FY 2005,” March 2004, p. 4, is \$402.0

**Many of the problems plaguing the world are largely impervious to external solution (even by a country as powerful as the United States).**

billion total obligational authority, \$402.7 billion budget authority, and \$450.6 total national defense outlays. The latter two categories include Department of Energy and other defense-related expenditures. For analytic purposes, this study uses the \$402.0 total obligational authority figure, which is just Department of Defense expenditures, as the FY05 baseline budget.

4. U.S. Department of Defense, "Fiscal 2005 Department of Defense Budget Release."

5. Tony Capaccio, "Bush Asks \$419 Billion for Defense in 2006 Budget," *Bloomberg.com*, February 3, 2004, <http://www.bloomberg.com/apps/news?pid=10000087&sid=azmHC7GHR6ZU>. This analysis uses the FY05 budget because the complete details of the FY06 budget have not yet been released. The methodology used in this analysis could be applied to the FY06 budget.

6. Data compiled from International Institute for Strategic Studies (IISS), *The Military Balance 2004–2005* (London: Oxford University Press, 2004), pp. 353–58. Note that IISS uses the term "defense expenditures" to mean actual defense budget outlays plus any other defense-related outlays that may not be part of a country's defense budget. For NATO countries, defense expenditures are calculated using NATO's definition: "the cash outlays of central or federal government to meet the costs of national armed forces. The term 'armed forces' includes strategic, land, naval, air, command, administration, and support forces. It also includes paramilitary forces such as the gendarmerie, the customs service, and the border guard if these forces are trained in military tactics, equipped as a military force, and operate under military authority in the event of war" (p. 12).

7. Data compiled from *ibid.* Inflation factors to convert to constant FY 2005 dollars derived from Office of the Under Secretary of Defense (Comptroller), "National Defense Budget Estimates for FY 2005," Table 6-1, "Department of Defense TOA by Title," pp. 66–67.

8. Data for 1997 compiled from IISS, *The Military Balance 1998–1999* (London: Oxford University Press, 1998), pp. 295–300.

9. *Ibid.*, p. 16.

10. IISS, *The Military Balance 2003–2004*, pp. 264, 294.

11. *Ibid.*, pp. 353–54.

12. "[From] the mid-1980s [until the end of the Cold War], the Soviet Union devoted between 15 and 17 percent of its annual gross national product

to military spending, according to United States government sources." "Russian Military Budget," *GlobalSecurity.org*, <http://www.globalsecurity.org/military/world/russia/mo-budget.htm> (accessed February 17, 2005).

13. See, for example, U.S.-China Economic and Security Review Commission, "2004 Annual Report to Congress," June 2004; and Bill Gertz, *The China Threat: How the People's Republic Targets America* (Washington: Regnery, 2000).

14. Harold Brown, Joseph W. Prueher, and Adam Segal, *Chinese Military Power* (New York: Council on Foreign Relations Press, 2003), p. 2.

15. IISS, *The Military Balance 2004–2005*, p. 322.

16. *Ibid.*, p. 355.

17. *Ibid.*

18. For further analysis of Russia and China as potential threats, see Ivan Eland, "Tilting at Windmills: Post-Cold War Military Threats to U.S. Security," Cato Institute Policy Analysis no. 332, February 8, 1999, pp. 18–30; Ivan Eland, *Putting "Defense" Back into U.S. Defense Policy: Rethinking U.S. Security in the Post-Cold War World* (Westport, CT: Praeger, 2001), pp. 48–63; and Ivan Eland, "Is Chinese Military Modernization a Threat to the United States?" Cato Institute Policy Analysis no. 465, January 23, 2003.

19. According to IISS, *The Military Balance 2004–2005*, pp. 323, 302, 305, 336, North Korea's GDP was \$22 billion, Iran's GDP was \$128 billion, Syria's GDP was \$21.7 billion, and Cuba's GDP was \$30.2 billion.

20. *Ibid.*, p. 264.

21. Defense expenditures were \$5.5 billion for North Korea, \$3.1 billion for Iran, \$1.5 billion for Syria, and \$1.2 billion for Cuba. *Ibid.*, pp. 355, 354, 356.

22. The North Koreans could have as many as eight nuclear weapons. See David E. Sanger and William J. Broad, "Atomic Activity in North Korea Raises Concerns," *New York Times*, September 12, 2004, p. 1. And they have deployed new medium- and intermediate-range ballistic missiles with an estimated range of 2,500–4,000 kilometers based on the decommissioned Soviet R-27 SLBM (NATO designation SS-N-6) rather than cruder Scud missiles. See Joseph Bermudez, "North Korea Deploys New Missiles," *Jane's Defence Weekly*, August 4, 2004, p. 6.

23. Iran is thought to be on the verge of acquiring the capability to process uranium that could be used for nuclear weapons, whereas there is no

doubt that North Korea is capable of building nuclear weapons. See Joseph Cirincione and Jon B. Wolfsthal, "North Korea and Iran: Test Cases for an Improved Nonproliferation Regime?" *Arms Control Today*, December 2003, pp. 11–14. North Korea's ballistic missile program is more advanced than Iran's. In fact, Iran's ballistic missile program has been supplied by North Korea. See Andrew Feickert, "Missile Survey: Ballistic and Cruise Missiles of Foreign Countries," Congressional Research Service Report for Congress RL30427, updated March 5, 2004.

24. Steven M. Kosiak, "Analysis of the FY 2005 Defense Budget Request," Center for Strategic and Budgetary Assessments, January 2004, p. 3.

25. U.S. Department of Defense, "Active Duty Military Personnel Strengths by Regional Area and by Country," December 31, 2002, <http://www.dior.whs.mil/mmis/Mo5/hst1202.pdf>.

26. Although a somewhat confusing term, this is known as a 3:1 rotation ratio, i.e., three total units required to keep one unit on duty (not three units for every deployed unit) and is a realistic planning assumption for a volunteer military force. For example, see Douglas Holtz-Eakin, "The Ability of the U.S. Military to Sustain an Occupation in Iraq," Congressional Budget Office testimony before the House Committee on Armed Forces, November 5, 2003, Appendix C: "Deployment Tempo and Rotation Ratios," pp. 34–39.

27. John A. Tirpak, "Enduring Freedom," *Air Force*, February 2002, p. 34.

28. U.S. Department of Defense, "Active Duty Military Personnel Strengths by Regional Area and by Country."

29. According to IISS, *The Military Balance 2004–2005*, Austria's GDP was \$253 billion and defense expenditures were \$2.5 billion (p. 289), Belgium's GDP was \$305 billion and defense expenditures were \$3.9 billion (p. 275), Denmark's GDP was \$211 billion and defense expenditures were \$3.3 billion (p. 275), Finland's GDP was \$162 billion and defense expenditures were \$2.3 billion (p. 290), France's GDP was \$1.75 trillion and defense expenditures were \$45.7 billion (p. 276), Germany's GDP was \$2.41 trillion and defense expenditures were \$35.1 billion (p. 276), Greece's GDP was \$174 billion and defense expenditures were \$7.2 billion (p. 276), Ireland's GDP was \$148 billion and defense expenditures were \$803 million (p. 291), Italy's GDP was \$1.47 trillion and defense expenditures were \$27.7 billion (p. 277), Luxembourg's GDP was \$26 billion and defense expenditures were \$233 million (p. 278), Netherlands' GDP was \$514 billion and defense expenditures were \$8.2 billion

(p. 278), Portugal's GDP was \$152 billion and defense expenditures were \$3.2 billion (p. 278), Spain's GDP was \$842 billion and defense expenditures were \$9.9 billion (p. 279), Sweden's GDP was \$302 billion and defense expenditures were \$5.5 billion (pp. 291–92), and the United Kingdom's GDP was \$1.8 trillion and defense expenditures were \$42.8 billion (p. 280).

30. *Ibid.*, p. 323.

31. *Ibid.*

32. *Ibid.*, p. 322.

33. This is a top-down macrolevel analysis to illustrate the costs of the current U.S. strategy of forward deployment and the potential savings that could be realized if U.S. strategy were changed and we pulled back from an extended defense perimeter. As such, the analysis is not a detailed evaluation of U.S. military force structure. And the reductions would be marginally less if a continued U.S. military presence in Afghanistan were deemed necessary.

34. Les Aspin, "Report on the Bottom-Up Review," Office of the Secretary of Defense, October 1993.

35. Using a "bottom-up" approach, the *Cato Handbook on Policy*, 6th ed. (Washington: Cato Institute, 2005), pp. 513–16, prescribed a force structure based on the requirement to fight a single major regional conflict. That alternative force structure would allow the United States to reduce U.S. Army active duty divisions by 50 percent; U.S. Air Force active duty air wings by 30 percent and heavy bombers by 10 percent; U.S. Navy total ships by 37 percent, aircraft carriers by 50 percent, air carrier wings by 45 percent, and attack submarines by 55 percent; and U.S. Marine Corps active duty divisions by 67 percent.

36. Office of the Under Secretary of Defense (Comptroller), "Military Personnel Programs (M-1)," *Department of Defense Budget Fiscal Year 2005*, revised March 25, 2004, p. 23.

37. For analytic purposes, the assumption here is that a 40 percent reduction in military personnel would directly result in a 40 percent cost savings. Depending on the type of personnel reduced, the actual cost savings might be marginally more or less.

38. Office of the Secretary of Defense (Comptroller), "Operations Programs (O-1)," *Department of Defense Budget Fiscal Year 2005*, February 2004, p. 1.

39. Associated Press, "Army Ends 20-Year Helicopter Program," *CNN.com*, February 23, 2004,

<http://www.cnn.com/2004/US/02/23/helicopter.cancel.ap>.

40. "F-15 Eagle Specifications," *GlobalSecurity.org*, <http://www.globalsecurity.org/military/systems/aircraft/f-15-specs.htm> (accessed November 17, 2004).

41. U.S. Department of Defense, "Selected Acquisition Report (SAR) Summary Tables," August 13, 2004, p. 6. It should be noted that unit costs are the average cost per aircraft for the entire program and are one way to compare relative costs. Decisions about two competing systems could also be based on the marginal cost, i.e., the cost to produce the next weapon. According to the Defense Department, the most recent procurement cost for the F-15E was \$132.3 million per aircraft for five fighters in FY01. U.S. Department of Defense, "Program Acquisition Costs by Weapon System," February 2002, p. 15. However, in the prior fiscal year, five F-15Es were procured for \$291.6 million, or \$58.3 million per aircraft (p. 15), so the actual marginal cost for the F-15E is likely substantially less than \$100 million. By comparison, the procurement cost for the F-22 in FY05 was \$173.2 per aircraft based on buying 24 aircraft. U.S. Department of Defense, "Program Acquisition Costs by Weapon System," February 2004, p. 19. As a general rule, it should be expected that the marginal cost of producing an existing weapon system (assuming a production line is open or can be reopened at minimal cost) will be lower than the marginal cost of a new system that is not yet in production or is in the early stages of production. Subsequent cost comparisons in this analysis use unit cost.

42. *Ibid.*

43. Project on Government Oversight, "Fighting with Failures: F/A-22 Raptor," March 15, 2004, <http://www.pogo.org/p/defense/do-040301-fa22.html>.

44. Christopher Bolkcom, "F-22 Raptor Aircraft Program," Congressional Research Service Issue Brief for Congress IB87111, updated January 14, 2002, p. CRS-8.

45. Quoted in Hampton Stephens, "USAF: Indian Exercises Showed Need for F/A-22, Changes in Training," *Inside the Air Force*, June 4, 2004.

46. IISS, *The Military Balance 2003–2004*, p. 24.

47. *Ibid.*, pp. 93, 110, 122, 155, 161.

48. It is worth noting that the Indian Air Force only has 744 combat aircraft, of which only 125 are tactical fighters, so in actual combat they

would not likely outnumber U.S. tactical fighters. *Ibid.*, p. 137.

49. Loren B. Thompson, "Indian Air Force Defeats U.S. Fighters in Exercise," Lexington Institute Issue Brief, June 15, 2004, <http://www.lexingtoninstitute.org/defense/040615.asp>.

50. See Paul Richter and John-Thor Dahlburg, "Crisis in Yugoslavia," *Los Angeles Times*, April 3, 1999, p. A9; Craig R. Whitney, "Crisis in the Balkans: The Bombing," *New York Times*, April 29, 1999, p. A12; Patrick Boyle, "Iraqi Air Defenders Use Shoot-and-Hope Method," *Washington Times*, February 5, 1991, p. A10; and Thomas E. Ricks, "Bombs in Iraq Raid Fell Wide of Targets," *Washington Post*, February 22, 2001, p. A1.

51. "B-52 Stratofortress Specifications," *GlobalSecurity.org*, <http://www.globalsecurity.org/wmd/systems/b-52-specs.htm> (accessed February 16, 2005). The B-52H also has an internal weapons bay that can carry a wide array of munitions, up to a maximum of 27 weapons.

52. "F-22 Raptor Specifications," *GlobalSecurity.org*, <http://www.globalsecurity.org/military/systems/aircraft/f-22-specs.htm> (accessed February 16, 2005). There are no official specifications for the F-22's total payload capacity or range, but they will be significantly less than those of a heavy bomber such as the B-52.

53. Boeing, "F-15 Eagle," [http://www.boeing.com/defense-space/military/f15/f15\\_back.htm](http://www.boeing.com/defense-space/military/f15/f15_back.htm) (accessed February 16, 2005).

54. U.S. Air Force, "F-15E Strike Eagle," <http://www.af.mil/factsheets/factsheet.asp?fsID=102> (accessed February 16, 2005).

55. Tirpak, p. 34.

56. See Elaine M. Grossman, "Navy Test Report Shows F-18E/F Struggling to Match Older Aircraft," *Inside the Pentagon*, February 11, 1999, p. 1.

57. General Accounting Office, "Progress of the F/A-18E/F Engineering and Manufacturing Development Program," Report to Congressional Committees, GAO-NSIAD-99-127, June 1999, p. 3.

58. General Accounting Office, "F/A-18 Will Provide Marginal Operational Improvement at High Cost," Report to Congressional Committees, GAO-NSIAD-96-98, June 1996, p. 5.

59. U.S. Department of Defense, "Selected Acquisition Report (SAR) Summary Tables," p. 5.

60. "A-6 Intruder," *GlobalSecurity.org*, <http://www>.

globalsecurity.org/military/systems/aircraft/a-6.htm (accessed February 16, 2005).

61. Ibid.

62. "F/A-18 Hornet Specifications," *GlobalSecurity.org*, <http://www.globalsecurity.org/military/systems/aircraft/f-18-specs.htm> (accessed February 16, 2005).

63. Office of Naval Intelligence, "Worldwide Challenges to Naval Strike Warfare," pp. 34-35, cited in Michael O'Hanlon, *How to Be a Cheap Hawk: The 1999 and 2000 Defense Budgets* (Washington: Brookings Institution Press, 1998), p. 120.

64. IISS, *The Military Balance 2003-2004*, pp. 21, 155, 161.

65. U.S. Department of Defense, "Program Acquisition Costs by Weapon System," 2004, p. 8.

66. For more detailed analysis of the V-22, see Charles V. Peña, "V-22: Osprey or Albatross?" Cato Institute Foreign Policy Briefing no. 72, January 8, 2003.

67. Center for Defense Information, "U.S. Military Transformation: Not Just More Spending, But Better Spending," January 31, 2002, <http://www.cdi.org/mrp/transformation.cfm>.

68. U.S. Department of Defense, "Selected Acquisition Report (SAR) Summary Tables," p. 5.

69. U.S. Department of Defense, "Program Acquisition Costs by Weapon System," 2004, p. 24.

70. Unless otherwise noted, data for comparing the V-22 with helicopters are drawn from the following sources: "V-22 Osprey," *GlobalSecurity.org*, <http://www.globalsecurity.org/military/systems/aircraft/v-22-specs.htm>; "CH-46 Sea Knight," *GlobalSecurity.org*, <http://www.globalsecurity.org/military/systems/aircraft/ch-46-specs.htm>; "CH-53 Sea Stallion," *GlobalSecurity.org*, <http://www.globalsecurity.org/military/systems/aircraft/h-53-specs.htm>; "MH-60L Blackhawk," *GlobalSecurity.org*, <http://www.globalsecurity.org/military/systems/aircraft/mh-60l-specs.htm>; "V-22 Osprey," *Global Aircraft.org*, [http://www.globalaircraft.org/planes/v-22\\_osprey.pl](http://www.globalaircraft.org/planes/v-22_osprey.pl); "CH-46 Sea Knight," *Global Aircraft.org*, [http://www.globalaircraft.org/planes/ch-46\\_seaknight.pl](http://www.globalaircraft.org/planes/ch-46_seaknight.pl); "CH-53 Sea Stallion," *Global Aircraft.org*, [http://www.globalaircraft.org/planes/ch-53\\_sea\\_stallion.pl](http://www.globalaircraft.org/planes/ch-53_sea_stallion.pl); and "UH-60 Blackhawk," *Global Aircraft.org*, [http://www.globalaircraft.org/planes/uh-60\\_blackhawk.pl](http://www.globalaircraft.org/planes/uh-60_blackhawk.pl). All accessed February 16, 2005.

71. Vortex ring state was the apparent cause of a V-22 crash on April 8, 2000, that killed the 4 crew

members and 15 Marines on board.

72. Presumably, the V-22 could crash land on water in such a situation.

73. For a more detailed analysis of nuclear attack submarines, see Ivan Eland, "Subtract Unneeded Nuclear Attack Submarines from the Fleet," Cato Institute Foreign Policy Briefing no. 47, April 1, 1998.

74. IISS, *Military Balance 2003-2004*, pp. 153, 19. "China has stated that it has built two Xia-class SSBNs, each of which can carry 12 JL-1 SLBMs [submarine-launched ballistic missiles]. However, reports conflict as to whether China has actually deployed two SSBNs. Most analysts estimate only one is operational (the 09-2)." Nuclear Threat Initiative, "China's Nuclear Submarine Program," *NTI.org*, <http://www.nti.org/db/china/wsubdat.htm> (accessed August 5, 2004).

75. Congressional Budget Office, "Increasing the Mission Capability of the Attack Submarine Force," March 2002, p. 3.

76. U.S. Department of Defense, "Selected Acquisition Report (SAR) Summary Tables," p. 5.

77. U.S. Department of Defense, "Program Acquisition Costs by Weapon System," 2004, p. 45.

78. Classified study cited in Congressional Budget Office, "Increasing the Mission Capability of the Attack Submarine Force," p. 1.

79. Ibid., p. 3.

80. The U.S. Navy currently has 44 DDG-51 Arleigh Burke-class Aegis destroyers and 26 CG-47 Ticonderoga-class Aegis cruisers in the fleet. With 91 and 122 vertical launch system (VLS) cells each, respectively, those ships provide ample capacity (more than 7,000 VLS launch cells) to dedicate a substantial portion to the land-attack mission. Thus, the U.S. Navy will have formidable land-attack capabilities that obviate the need for the DD(X) destroyer, which will cost \$1.5 billion for the first ship and could have a total program cost of more than \$100 billion for 70 ships in the DD(X) family (destroyers, cruisers, and littoral combat ships).

81. Eland, *Putting "Defense" Back into U.S. Defense Policy*, p. 105.

82. Obviously, the United States is faced with a serious terrorist threat. However, asymmetric threats posed by men wielding box cutters or bombers using TNT as in the Madrid attacks will not be deterred or defeated by any of the forces or military systems advocated to be cut in this study.

83. Eland, *Putting "Defense" Back into U.S. Defense Policy*, pp. 203–20.
84. Inflation factor derived from Office of the Under Secretary of Defense (Comptroller), "National Defense Budget Estimates for FY 2005," p. 67.
85. National Commission on Terrorist Attacks upon the United States, *The 9/11 Commission Report* (New York: W.W. Norton, 2004), p. 362.
86. Associated Press, "Bush: Al Qaeda Capture Shows War on Terror Is Succeeding," March 4, 2003, <http://www.foxnews.com/story/0,2933,80149,00.html>.
87. George W. Bush, "State of the Union Address," January 20, 2004, <http://www.whitehouse.gov/news/releases/2004/01/20040120-7.html>.
88. For a more detailed analysis of intelligence capabilities needed for the war on terrorism, see James W. Harris, "Building Leverage in the Long War: Ensuring Intelligence Community Creativity in the Fight against Terrorism," Cato Institute Policy Analysis no. 439, May 16, 2002.
89. National Commission on Terrorist Attacks upon the United States, p. 410.
90. Air Force Intelligence, Army Intelligence, Central Intelligence Agency, Defense Intelligence Agency, Department of Energy (Office of Intelligence), Department of Homeland Security (Information Analysis and Infrastructure Protection), Department of State (Bureau of Intelligence & Research), Department of the Treasury (Office of Intelligence Support), Federal Bureau of Investigation, Marine Corps Intelligence, National Geospatial-Intelligence Agency, National Reconnaissance Office, National Security Agency, and Navy Intelligence. United States Intelligence Community, "Members of the Intelligence Community," <http://www.intelligence.gov/1-members.shtml> (accessed August 3, 2004). See also David E. Kaplan, "Mission Impossible," *U.S. News & World Report*, August 2, 2004, pp. 38–39.
91. Douglas Jehl, "Disclosing Intelligence Budgets Might Be Easiest of 9/11 Panel's Recommendations," *New York Times*, July 29, 2004, p. A16. See also Center for Defense Information, "Intelligence Funding and the War on Terror," February 26, 2002, <http://www.cdi.org/terrorism/intel-funding-pr.cfm>.
92. Lisa Myers, Doug Pasternak, and the NBC News Investigative Unit, "'Eyes in the Sky' Flying Blind?" *MSNBC.com*, updated January 2, 2004, <http://msnbc.msn.com/id/3660554/>.
93. Office of the Secretary of Defense, "Unmanned Aerial Vehicles Roadmap: 2000–2005," April 2001, p. ii.
94. Reported in Gail Kaufman, "UAVs Shifted Role in Iraq Operations," *Defense News*, December 8, 2003, p. 24.
95. "U.S. Missile Hits Suspected Al Qaeda Leader," *CNN.com*, February 7, 2002, <http://www.cnn.com/2002/WORLD/asiapcf/central/02/07/ret.hellfire.alqaeda/>.
96. Walter Pincus, "U.S. Strike Kills Six in Al Qaeda," *Washington Post*, November 5, 2002, p. A1. See also Associated Press, "U.S. Kills Al-Qaeda Suspects in Yemen," *USA Today*, November 5, 2002, [http://www.usatoday.com/news/world/2002-11-04-yemen-explosion\\_x.htm](http://www.usatoday.com/news/world/2002-11-04-yemen-explosion_x.htm).
97. Office of the Secretary of Defense, "Unmanned Aerial Vehicles Roadmap: 2002–2027," December 2002, p. iv.
98. Congressional Budget Office, "Options for Enhancing the Department of Defense's Unmanned Aerial Vehicle Programs," September 1998, p. ix.
99. Quoted in Jim Garamone, "Unmanned Aerial Vehicles Fly High after Afghanistan," Armed Forces Press Service, April 2002, *DefendAmerica.mil*, <http://www.defendamerica.mil/articles/apr2002/a041602b.html>.
100. Quoted in Lisa Myers, "Osama bin Laden: Missed Opportunities," *MSNBC.com*, March 17, 2004, <http://www.msnbc.com/id/4540958/>.
101. Office of the Secretary of Defense, "Unmanned Aerial Vehicles Roadmap: 2002–2027," p. 59.
102. U.S. Department of Defense, "Program Acquisition Cost by Weapon System," 2004, p. 23.
103. Obviously, an added benefit of UAVs is that pilots' lives are not at risk with every sortie. Though hard to quantify in budgetary terms, that benefit is real and should be acknowledged.
104. U.S. Department of Defense, "United States Special Operations Forces: Posture Statement 2003–2004," p. 36.
105. Barbara Starr, "Sources: Rumsfeld Calls for Special Ops Covert Action," *CNN.com*, August 2, 2002, <http://www.cnn.com/2002/US/08/02/rumsfeld.memo/>.
106. National Commission on Terrorist Attacks upon the United States, p. 415.
107. John Deutch and Jeffrey H. Smith, "Smarter



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108. Thom Shanker and James Risen, “Rumsfeld Weighs Covert Activities by Military Units,” *New York Times*, August 12, 2002, p. A1.
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113. Quoted in “Pentagon People Person,” *GovExec.com*, February 9, 2004, <http://www.govexec.com/dailyfed/0204/020904ff.htm>.
114. “U.S. Representative Frank R. Wolf (R-VA) Holds Hearing on FBI Appropriations,” March 17, 2004, Federal Document Clearing House, transcript, <http://web.lexis-nexis.com/universe/>.
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