Limiting Regret

Building the Army We Will Need

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Key findings

- The world has changed following the foundational defense planning in the 2014 Quadrennial Defense Review.
- Emerging and growing threats increase the likelihood that U.S. commitments in key regions will be challenged.
- Planned cuts to the U.S. Army will result in too few ground forces to satisfy national security commitments.
- DoD should pause the drawdown of Army active and reserve component soldiers.
- DoD should fund the highest possible readiness levels among ground forces in both active and reserve components.
- DoD should establish plans for mobilizing the entire Army National Guard, Army Reserve, and Marine Corps Reserve.

This report addresses how the U.S. Army—as part of a joint, interagency, intergovernmental, and multinational force—can help the nation achieve its highest-level national security interests and mitigate the most important risks.[1] In a resource-constrained environment, such as the current one, it is particularly important to assess how well U.S. strategies and force plans meet these desired ends.

U.S. national interests have remained remarkably constant over time and between presidential administrations.[2] In the 2015 National Security Strategy (NSS), President Obama listed the "enduring national interests" of the United States as

- The security of the United States, its citizens, and U.S. allies and partners;
- A strong, innovative, and growing U.S. economy in an open international economic system that promotes opportunity and prosperity;
- Respect for universal values at home and around the world; and
- A rules-based international order advanced by U.S. leadership that promotes peace, security, and opportunity through stronger cooperation to meet global challenges.[3]

In the 2015 NSS, President Obama lists the "top strategic threats"—in priority order—as

- Catastrophic attack on the U.S. homeland or critical infrastructure;
- Threats or attacks against U.S. citizens abroad and our allies;
- Global economic crisis or widespread economic slowdown;
- Proliferation and/or use of weapons of mass destruction;
- Severe global infectious disease outbreaks;
- Climate change;
- Major energy market disruptions; and
- Significant security consequences associated with weak or failing states (including mass atrocities, regional spillover, and transnational organized crime).[4]

The Department of Defense (DoD)—as part of a "whole-of-government" approach—develops strategies to defeat or mitigate the most serious threats to the nation and plans for and resources the military forces and capabilities needed to execute the chosen strategy. One can think of the U.S. Army's ability to help execute the nation's defense strategy in terms of three dimensions: (1) the number of Army soldiers, which is referred to as *end strength*; (2) how well prepared the Army's units are to operate, which is called their *readiness*; and (3) how modern Army equipment is.[5] Although all three dimensions are critical, this report focuses on the first two: how big and how ready the nation needs its Army to be—from a joint viewpoint—to deploy enough ready soldiers to fulfill America's commitments and to deal with potential surprises down the road.[6]

UNDERSTANDING THE POTENTIAL FOR STRATEGIC FAILURE AND REGRET—A QUICK LOOK AT THE RECENT PAST

The DoD—and the Army—estimates how many ground forces are needed to achieve the security goals set by the President given existing and emerging threats.[7] Failure to correctly estimate the numbers of soldiers needed, or to adequately resource the Army to provide them, can lead to a failure of the U.S. strategy and subsequent regret.[8] In this context, *strategic failure* refers to the failure of the forces DoD provides to meet the key national interests articulated earlier.

A quick look at the recent past can provide important examples of how changes in strategy can cause a spike in troop demands that the Army may struggle to meet. In 2007, the Bush administration determined that it would need to "surge" an additional five brigades and supporting troops to Iraq to achieve the administration's objectives there.[9] In 2008, the Bush administration also decided to send additional troops to Afghanistan to meet an urgent request from U.S. commanders.[10] The Obama administration then continued and expanded the Afghanistan surge to reverse "years of neglect."[11]

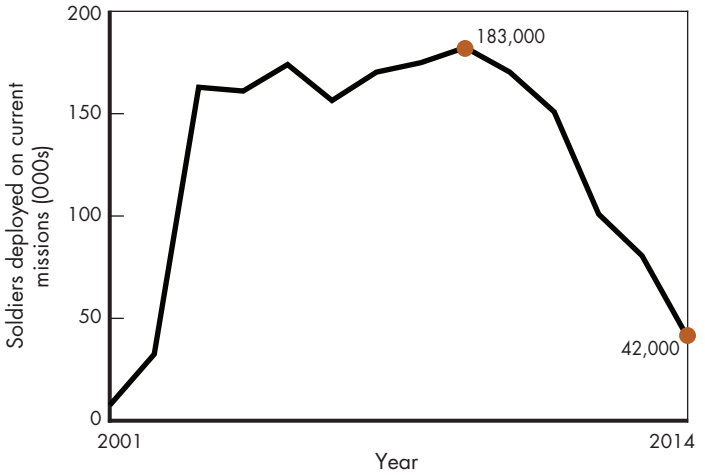
Unfortunately, insufficient ground forces existed to meet the demands in both Iraq and Afghanistan. No more soldiers or marines could be sent to Afghanistan until they were taken out of Iraq.[12] And yet commanders in Iraq were arguing for slower cuts in their troop strength.[13] This necessitated a compromise between the theaters, with the availability of soldiers for Afghanistan closely tied to the drawdown of U.S. forces in Iraq.[14]

In fall 2009, despite having increased the number of active component soldiers by 63,000 by 2008, the Army was deploying as many soldiers as it could to cover the surge in troops for Iraq and Afghanistan and other global commitments (Figure 1). By 2009, the Army had committed 183,000 troops on the ground for these and other operations, and President Obama was about to increase troops in Afghanistan further.[15] To provide these soldiers, the Army had already lengthened deployments to 15 months and was subsequently forced to increase rotation rates beyond 1:1.[16]

So, in 2009, Secretary of Defense Robert M. Gates announced an end-strength increase of 22,000 soldiers to backfill units and care for wounded warriors; as a result, the Army grew to 566,000 soldiers.[17] Over the next five years, total Army deployments for Operation Iraqi Freedom (OIF) virtually ended and deployments for Operation Enduring Freedom (OEF) (including operations outside Afghanistan) and around the world tapered off to about 42,000 by the end of July 2014.[18]

In the context of the force drawdowns in OIF and OEF, the *Quadrennial Defense Review (QDR) 2014* began to rebalance U.S. military operations toward a focus in the Asia-Pacific region. For the Army, this entailed prescribed cuts in end strength, from the high of 566,000 active component soldiers to 450,000—or as low as 420,000 if sequestration continued.[19] The QDR also directed the Army to cut the Army Reserve from a high of 206,000 to 195,000 soldiers and the Army National Guard from a high of 358,000 to 335,000 soldiers. These levels would be reduced to 185,000 soldiers and 315,000 soldiers, respectively, with sequestration.

Figure 1. Army troop deployments, 2001–2014



New threats to the nation's security have emerged—and existing threats have worsened—that affect current and potential demand for Army ground forces.

However, since the QDR report was released, new threats to the nation's security have emerged—and existing threats have worsened—that affect current and potential demand for Army ground forces. In this report, we assess three especially salient examples that the President has specifically addressed: the Islamic State in Iraq and the Levant (ISIL), Russian aggression in the Baltics, and North Korean provocation or nuclear threats.

ISIL emerged after the release of the QDR, adding to violent extremist activity throughout Africa, the Middle East, and Asia. Other violent extremists include al Qaeda affiliates in Yemen, Libya, Mali, Somalia, and the Philippines; Boko Haram and other terror groups in equatorial Africa; and cyber- and narcocriminals around the world. Worse, the Russians have invaded Crimea and Eastern Ukraine. This raises concerns about the security of the eastern North Atlantic Treaty Organization (NATO) allies, especially Estonia, Latvia, and Lithuania. Finally, North Korea continues to develop its strategic nuclear and long-range missile capabilities and to provoke South Korea with artillery fires and other threatening behavior. These provocations follow the 2010 North Korean artillery attacks on Yeonpyeong Island, which killed South Korean marines and civilians. This aggressive behavior and the continued bellicose nature of North Korean political rhetoric raise the potential that future provocations might spiral out of control.

Other potential trouble spots also come to the forefront from time to time that may affect future demands on ground forces. These include Iran's nuclear program and China's territorial disputes with its neighbors, including Japan and the Philippine Islands—two U.S. treaty allies. Wildcards also emerge from time to time, such as the Ebola outbreak in Africa last year. And, as always, the United States and its military forces must be prepared to support civil authorities at home.

This snapshot of the recent past highlights the uncertainty that the Army faces in trying to understand what forces it will need for future demands. So what does the nation require from the Army to meet these challenges, and how does this national need translate to sufficient end strength to avoid strategic failure and regret?[20] This report breaks that question down into five subquestions:

- How are we using the Army we have now?
- What commitments has the United States made, and how do they compare with the force plans to meet them?
- What regret might result from not meeting the commitments?
- What ground forces would be needed to meet the commitments?
- What are some alternative approaches to limit regret?

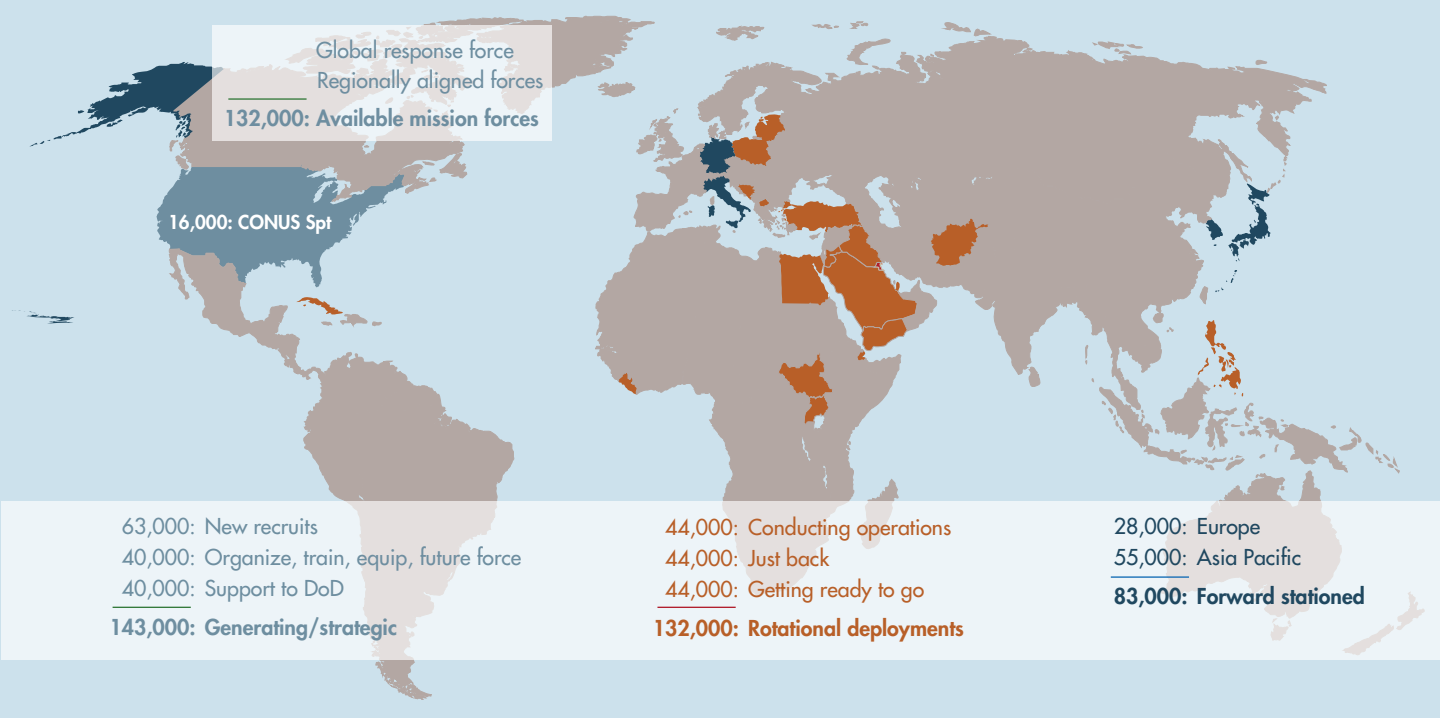
HOW ARE WE USING THE ARMY WE HAVE NOW?

At present, the United States maintains forces around the world (Figure 2).[21] As shown on the map in orange, the Army has committed approximately 44,000 troops to current operations. This includes 2,600 soldiers in Iraq and 7,200 soldiers in Afghanistan, where the mission has been extended through the end of 2016.[22] Another 14,000 soldiers are deployed elsewhere in that region, and 20,000 more soldiers are conducting deployed operations elsewhere around the world, including 4,900 soldiers now on rotational assignment in South Korea.[23]

Service members are generally deployed rotationally, with deployments followed by longer periods at home station. For the Army, current practice is one nine-month deployment followed by at least twice as much time (18 months) at home, which is referred to as a 1:2 deployment ratio.[24] At a 1:2 deployment ratio, it takes 132,000 troops to keep 44,000 troops deployed in the field: 44,000 conducting operations; 44,000 just back from conducting operations; and 44,000 getting ready to go out and conduct operations.

The Army also has 83,000 forward-stationed troops, including 28,000 troops in Europe with NATO and 55,000 more in the Asia-Pacific region. Since these troops are home

Figure 2. Soldiers conducting current worldwide missions



based in these regions, there is no rotational deployment, which means the 83,000 soldiers conduct missions from their home bases. Forward-stationed troops are indicated on the map in dark blue.

Finally, the Army has 143,000 soldiers conducting what DoD calls "infrastructure activities" (shown on the map in blue). We will refer to these as *generating force* or *strategic force* activities.[25] At any given time, about 63,000 new soldiers are being trained or educated; 40,000 soldiers are organizing, training, and equipping the Army and building the capabilities we will need in the future; and 40,000 soldiers provide support for joint and national missions, including the 24,000 soldiers in the Army Medical Command; 8,000 soldiers in joint assignments; and other support to the Intelligence Community, combatant commands, and defense-wide activities.

Summing these current demands, the Army has nearly 360,000 soldiers meeting the demands of ongoing operations and infrastructure activities. In addition, the Army has 16,000 soldiers conducting support operations in the continental United States (CONUS), and 132,000 soldiers in CONUS supporting the Global Response Force (GRF), Regionally Aligned Force (RAF) missions, or available for other deployments. (These 16,000 CONUS support and 132,000 GRF, RAF, and other available mission forces will be among those assigned to contingencies in the analyses that follow).

WHAT COMMITMENTS HAS THE UNITED STATES MADE, AND HOW DO THEY COMPARE WITH THE FORCE PLANS TO MEET THEM?

The Army also has to prepare soldiers and units to help joint forces respond to new contingencies. To determine potential demand for new contingencies, we need to compare current U.S. national commitments—reaffirmed in the most recent NSS and Presidential statements—with the demands identified earlier.

We focus here on just three commitments that became particularly salient in the same year the QDR was released. Table 1 compares what the *NSS 2010* and *NSS 2015* say and what President Obama has said in speeches and policy statements with what the *QDR 2014* says.[26] What we see are some significant shortcomings in the forces planned to meet the three commitments.

First, the NSS commits the United States to "combatting the persistent threat of terrorism." President Obama went a step further, promising that the United States "will degrade and ultimately destroy" ISIL.[27] However, these commitments reflect a threat that became very serious after the current force planning was completed. The QDR did not anticipate the threat that ISIL is currently posing and was silent on the continuing threat posed by the Taliban; thus, U.S. planning to address violent extremists has mainly focused on efforts to continue to degrade al Qaeda. It turns out that the Middle East is in much worse shape than we assumed during the QDR: ISIL has emerged as a threat and is seizing population centers; the Taliban remains a threat to the Government of Afghanistan; and other groups have emerged, such as Houthis in Yemen, that are wrecking stability in the Middle East.

As a second important case, President Obama has prioritized "assuring allies and deterring aggression" and "defeating and denying aggression in multiple theaters." In a particularly moving declaration of this commitment in Tallinn, Estonia, President Obama stated that the United States, as part of NATO, would "be here" to defend the territorial integrity of Estonia, Latvia, and Lithuania. He went on to say: "[Y]ou lost your independence once before. With NATO, you will never lose it again."[28] However, the QDR did not anticipate the Russian invasion of Crimea and Ukraine and the resulting implications for the NATO Baltic states. The QDR report does observe that "Russia's multidimensional defense modernization and actions that violate the sovereignty of its neighbors present risks" but offered the response that "[w]e will engage Russia to increase transparency and reduce the risk of military miscalculation." While continuing to engage Russia is necessary and helpful, the current planning construct does not address the forces and posture needed to deter Russian aggression in Eastern Europe.

As a third important case, North Korea poses several threats to the United States, South Korea, and the region. The historical North Korean threat has been a large conventional invasion, with armored and infantry forces attacking south supported by SOF and a massive artillery barrage, perhaps using both conventional and chemical weapons. The invasion threat seems to have receded in the past few decades, because a wealthy and technologically advanced South Korea can now provide well-trained and armed forces to defeat a conventional invasion.

The threat from the massive amount of North Korean artillery within range of Seoul and other border areas is still evolving. North Korea has over 13,000 artillery pieces and multiple rocket launchers, about 8,000 of which are garrisoned within 100 miles of South Korea in protected underground facilities. In addition to the prospect of nuclear weapons, North Korean artillery can fire a variety of chemical weapons.[29] In 2000, DoD stated the following:

> [W]ithout moving any artillery pieces, the North could sustain up to 500,000 rounds an hour against Combined Forces Command defenses for several hours. The artillery force includes 500 long-range systems deployed over the past decade. The proximity of these long-range systems to the Demilitarized Zone threatens all of Seoul with devastating attacks.[30]

Table 1. U.S. commitments compared to force planning

NSS and Presidential Commitments	Shortcoming of QDR 2014 Force Planning
Combat persistent threat of terrorism "We will degrade—and ultimately destroy—ISIL."	Scope and scale of ISIL threat were not anticipated.
Assure allies, deter aggression **Defeat, deny aggression in multiple theaters** "We will defend our NATO allies . . . we will defend the territorial integrity of every single ally."	Russian invasion of Crimea and Ukraine and potential threat to NATO Baltic states were not anticipated.
Prevent the spread and use of WMD "The U.S. and South Korea stand shoulder to shoulder in the face of Pyongyang's provocations and in refusing to accept a nuclear North Korea." "There is no greater threat to the American people than WMD."	North Korean artillery threat was not adequately addressed. Scope and scale of countering the North Korean WMD program are larger than what was resourced in the force plan.

Although South Korea has been living close to a North Korean artillery threat for many years, that threat is becoming potentially more dangerous, for several reasons. First, North Korea is reported to be expanding its long-range artillery and rocket units, putting more South Korean civilians within range even as South Korea builds new housing and factories ever closer to the Demilitarized Zone.[31] Second, North Korea used artillery to attack South Korean territory in 2010, inflicting civilian and military casualties. (In recent weeks, North Korea has fired its artillery into South Korean territory again.) Although the attack was relatively small and contained, it caused the South Korean leadership to devolve authority to respond in future attacks to tactical commanders,[32] ordering them to respond with "countermeasures three to five times stronger than an enemy attack."[33] Both measures might lead future provocations to escalate more rapidly. Third, the continued North Korean development of nuclear weapons and long-range missiles raises North Korea's ability to escalate and may encourage a more-provocative North Korean diplomatic and military posture.

The QDR planning construct places the most emphasis on the threat posed by the North Korean nuclear program and the long-range missiles under development that may, someday, carry them. The George W. Bush and Obama administrations have emphasized the dangers that WMD pose to the United States and its allies, friends, and interests. During a state visit to South Korea last year, President Obama reiterated that the United States would refuse to accept a nuclear North Korea.[34] Recently, U.S. experts estimated that the North Koreans might be able to produce enough fissionable plutonium and uranium to build up to 40 weapons by 2020; Chinese experts estimate the number to be up to 75.[35]

Opinions differ about how close the North Koreans are to building a miniaturized weapon capable of fitting within their long-range missiles, but their recently revealed ability to separate uranium could give them the ability to build gun-assembled fission weapons similar to the W-33 the U.S. Army deployed in 1956.[36] This weapon was small enough to be fired from an 8-inch artillery tube, yet produced yields of up to 10 kilotons.[37] If North Korea produced such a weapon, Seoul could be in range of nuclear weapons fired from existing, hardened, artillery sites.

Finally, the collapse of North Korea could lead to the theft and proliferation of nuclear weapons and materials from a large number of research and development, manufacturing, testing, and weapon storage sites.[38] President Obama has been especially clear about the threat that this would pose to the nation and its people, stating that

> There is no greater threat to the American people than weapons of mass destruction, particularly the danger posed by the pursuit of nuclear weapons by violent extremists and their proliferation to additional states.[39]

Unfortunately, neither the QDR nor the NSS say much about how the United States would effectively respond to these threats. The QDR references "maintain[ing] a robust footprint in Northeast Asia." The U.S. nuclear force and ballistic missile defense are specifically mentioned as the principal capabilities to deter a nuclear attack or to defeat the relatively small number of long-range North Korean missiles that might threaten the United States. The NSS states that U.S. nuclear forces will "communicate to nuclear-armed adversaries that they cannot escalate their way out of failed conventional aggression."[40]

However, North Korea may launch many shorter-range missiles against South Korea or Japan, potentially saturating their ballistic missile defenses. Worse, the U.S. strategy does not directly address the artillery threat to Seoul, including the potential use of North Korean artillery to employ WMD.

Perhaps most troubling of all, the 2014 QDR report relies on SOF to counter WMD. Although SOF would be crucial for conducting discrete operations and for reconnaissance and surveillance, SOF by itself cannot provide the scope and scale of capabilities needed to secure an entire national nuclear program from theft and proliferation.[41] North Korea's WMD program is estimated to comprise between 100 and 200 such sites.[42] Eliminating this program after a North Korean collapse—including finding, seizing, removing, and rendering safe weapons, components, and materials—would require a large and capable ground force.

In addition to these commitments, the United States has other alliances and treaty commitments that we do not explicitly address here but that place additional demands on ground forces. These include U.S. defense commitments to Japan, the Republic of the Philippines, and Thailand in the Asia-Pacific and assurances that we have given to Jordan, Israel, and U.S. Persian Gulf allies and partners to continue assisting their own security efforts and providing them some measure of protection. Most of the soldiers conducting the deployed missions described in Figure 2 are, in fact, upholding the training, advising, and other defense commitments that we have made to these important allies and friends. As we assess our ability to conduct the missions we use here as examples, it is important to note that the security of the United States, as well as its cred-

ibility as a dependable ally, depend largely on how conscientiously it keeps these commitments.

WHAT REGRET MIGHT RESULT FROM NOT MEETING U.S. COMMITMENTS?

What If ISIL Remains Strong?

If the United States abandons—or fails in—its efforts to degrade or destroy ISIL, one potential regret is the formation of an enduring ISIL terror-state with the leadership, safe havens, and resources to attack Western countries and interests. ISIL exploits captured territory to raise funds, attract new recruits, train terrorists, and support terror operations in Syria, Iraq, and elsewhere. It may be unlikely that the United States will destroy ISIL with the current level of effort and partner capabilities, although it does appear that ISIL's ability to grow has been checked to some degree. However, if ISIL were allowed to survive and evolve into a quasi-state, it would lead to continued instability in Iraq and Syria, if not to their de facto partition. As a state, ISIL could gain some legitimacy among Sunnis in the Islamic world. To the degree that ISIL poses a terror threat to the United States and its allies, as well as inflicting great harm on the people that it captures and rules, growth of its capabilities is a potential future regret.[43]

What If Russia Takes Military Action in the Baltics?

Russia has embarked on an extended campaign to reshape at least some of the former Soviet republics on its periphery. First in Georgia and now Ukraine, Russian forces have created or maintained autonomous regions for Russian expatriates through force of arms. Russia may be inclined to convince the Baltic states of Estonia and Latvia that the same treatment may be in store for them, perhaps to coerce closer relationships with Russia or to drive a wedge between them and other NATO nations. To bolster confidence in the alliance, the United States and other NATO nations have begun to deploy limited numbers of combat troops to the Baltics rotationally to more clearly demonstrate NATO's commitment to their collective defense. The forces thus far committed, however, are not sufficient to counter coercion or deter Russian aggression by denying its objectives in a rapid *fait accompli*.

If Russia decides to "reshape" its relationship or borders with the Baltic states, it could take one or several alternative approaches. First, Russian "volunteers" could enter Estonia and Latvia with the ostensible purpose of gaining autonomy for regions—such as Narva in Estonia—with a large expatriate presence.[44] These "volunteers" could work to gain some plausible measure of local support and then begin irregular operations against government security forces. Although it is not clear that ethnic Russians in Estonia and Latvia desire either separation from their current governments or closer ties to Russia,[45] the Russians appear to be building a pretext for intervening in the Baltics through such actions as reviewing the legality of the states' independence from the Soviet Union.[46] As in Ukraine, if the Russians meet significant resistance, they could call on regular Russian Army units for support, which have been devastating in their effects.[47] By themselves, Estonian, Latvian, and Lithuanian defenses would be no match for Russian armored, artillery, and air defense forces. If the United States and other NATO nations were then to begin to deploy forces in support of the Baltic states, Russian conventional forces could launch a swift invasion and present a *fait accompli* to NATO. If Russian forces attack, we estimate that, against currently stationed forces, they could reach the Baltic capitals in 36–60 hours.[48]

The occupation of some or all of one or more of the Baltic states would leave the U.S. President with few and bad choices: The President could decline to use force but instead rely on economic sanctions to persuade the Russians to leave, a strategy that could drag on for months or years. This option could badly damage U.S. and NATO credibility and the integrity of the alliance by setting a precedent that an attack against one does not necessarily oblige a military response from all. Or the President could choose to launch a counteroffensive to retake NATO territory after deploying enough forces to be decisive. This second option is particularly dangerous because Russia might declare the captured territory to be part of Russia; in the past, it has reserved the right of first use of nuclear weapons to defend Russian territory.[49] This would also potentially expose supporting NATO states, such as Poland and Germany, to attack with tactical nuclear weapons and may, thus, also put NATO at risk of fracturing.[50] At the very least, Russia would have the opportunity in the months between its capture of the Baltics and the U.S.–NATO counteroffensive to build a strong defense and to attempt to weaken the resolve of NATO nations to continue armed conflict. Both the sanctions and counteroffensive choices may lead to significant regret that stronger

measures were not taken to deter Russian misbehavior and aggression before the situation became a crisis.

What If North Korea Provokes a War or Collapses?

As already mentioned, a series of provocations from North Korea could spark a war, perhaps leading to an artillery barrage of Seoul. In that event, South Korea would have few options other than seizing North Korean territory within artillery range of Seoul to remove this threat and to ensure that future bombardments would not happen.

U.S. ground forces would be needed to play several roles in such an operation. First, U.S. forces would be assigned to evacuate U.S. nationals from affected areas. This would be a huge undertaking and might grow into providing more-general humanitarian assistance and support to Korean civil authorities. Second, South Korean forces have been designed principally to defend against a multiechelon invasion. They have not prioritized investments in the comprehensive logistics, combat engineering, and other maneuver capabilities needed to conduct offensive operations in hostile territory. U.S. forces, then, would be needed to provide these supporting capabilities. Third, the North Koreans are likely to have chemical and may—someday—deploy nuclear weapons with their artillery and other forward-deployed combat formations. U.S. forces would have a key role in seizing, securing, and safely removing these weapons and any large WMD production or storage sites that the forces may also run across. Finally, the South Korean Army may exhaust its combat strength before it is able to break through North Korean infantry and armored forces to root out all the artillery within range of South Korea. It may require U.S. ground forces—as well as air and naval forces—to help complete these operations.

The regret caused by not having an Army with sufficient capacity or capabilities to help South Korea might take several forms. First, there would be the regret of reneging on a promise made to a close and long-term ally. Second, North Korea may recognize that the United States is not able to effectively help South Korea if another contingency is absorbing U.S. attention and ground forces. Making such an observation might encourage North Korea to increase its provocations or other belligerent actions. Third, South Korea might recognize that the United States has not maintained the capability to effectively help it, with potentially serious ramifications if South Korea decides that it must seek greater destructive capabilities—including, perhaps, nuclear weapons—to deal with catastrophic attack by North Korea's massive conventional, chemical, or nuclear weapons.

Alternatively, a collapse of the North Korean regime—as a result of war or economic failure—leaves a large nuclear, chemical, and biological program unsecured and exposed to theft and proliferation. The regret in this case would be loose WMD, especially "loose nukes"—nuclear weapons that could be sold to violent extremists and perhaps smuggled into U.S. or allied cities and detonated.

WHAT GROUND FORCE WOULD BE REQUIRED TO MEET COMMITMENTS?

The U.S. response in each of the three exemplar missions we examined would comprise all levers of U.S. government power, including diplomacy, economic measures, and military force. Any military response would surely be joint—including air, land, sea, space, and cyber—in combination with whatever forces U.S. allies are willing and able to commit. We focused our attention on the ground forces needed because they were the component most stressed in the troop surges in Iraq and Afghanistan; because the QDR ordered ground forces to be cut significantly; and because, by the nature of their size and operating location, ground forces are necessarily the most visible force to be committed to or withdrawn from operations.

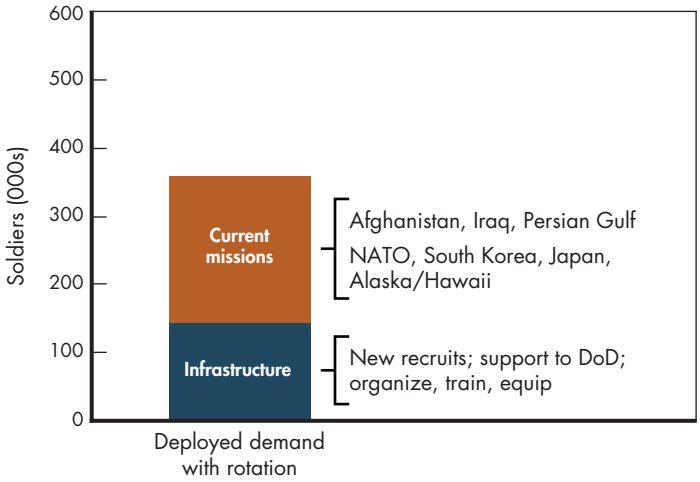
We begin our estimate of ground force requirements by showing those already committed to generating and strategic force activities and current missions in Figure 3. This amounts to the 360,000 troops discussed earlier and reflects the Army's existing rotational practice.

Degrading and Ultimately Destroying ISIL

We assume that the forces already engaged in counterterror and counterinsurgency missions in Figure 3 are sufficient to continue current training, advisory, and assistance operations against ISIL and other extremist groups. This includes forces assigned in Kuwait and Djibouti (including Joint Task Force–Horn of Africa) and in other worldwide counterterror, partner capacity building, and stability operations.

However, we make no claim that current efforts will effectively degrade, much less destroy, ISIL. Furthermore, if the mission were to change significantly—say, to include troops on the ground to direct air strikes, or combat forces to help liberate

Figure 3. Army troops needed to support current operations



the Iraqi cities of Mosul and Ramadi from ISIL—the forces needed to accomplish the increased scope of these missions would need to increase significantly. Even if current forces are sufficient to degrade ISIL, they are likely to remain busy with these missions and could not easily be pulled away—at least in the near term—for other operations.

Deterring and Defeating Aggression in the Baltics

Before we discuss the military posture needed to deter and defeat aggression in the Baltics—in terms of units and troops needed—it is worth discussing changes in U.S. political and military posture about Europe over the past two decades. In the 2002 Annual Defense Report, Secretary of Defense Donald Rumsfeld stated that

> Europe is largely at peace. Central European states are becoming increasingly integrated with the West, both politically and economically. An opportunity for cooperation exists with Russia. It does not pose a large-scale conventional military threat to NATO.[52]

In 2002, Army forces in Europe included a corps headquarters, two heavy divisions, six combat brigades, and their supporting forces, for a total of about 70,000 troops.[53] In 2005, DoD made the decision to return both heavy divisions to the United States.[54] By the beginning of 2008, Army forces in Europe had declined to one corps and one division headquarters, four combat brigades (two of these armored), supporting forces, and 47,000 soldiers.[55] By 2008, the political situation had deteriorated significantly, leading Secretary of Defense Robert Gates to state that

> Russia's retreat from openness and democracy could have significant security implications for the United States, our European allies, and our partners in other regions. Russia has leveraged the revenue from, and access to, its energy sources; asserted claims in the Arctic; and has continued to bully its neighbors, all of which are causes for concern. Russia also has begun to take a more active military stance, such as the renewal of long-range bomber flights, and has withdrawn from arms control and force reduction treaties, and even threatened to target countries hosting potential U.S. anti-missile bases. Furthermore, Moscow has signaled an increasing reliance on nuclear weapons as a foundation of its security. All of these actions suggest a Russia exploring renewed influence, and seeking a greater international role.[56]

In 2012, however, DoD stated that

> Most European countries are now producers of security rather than consumers of it. Combined with the drawdown in Iraq and Afghanistan, this has created a strategic opportunity to rebalance the U.S. military investment in Europe, moving from a focus on current conflicts toward a focus on future capabilities. *In keeping with this evolving strategic landscape, our posture in Europe must also evolve.* As this occurs, the United States will maintain our Article 5 commitments to allied security and promote enhanced capacity and interoperability for coalition operations. In this resource-constrained era, we will also work with NATO allies to develop a "Smart Defense" approach to pool, share, and specialize capabilities as needed to meet 21st century challenges. In addition, our engagement with Russia remains important, and we will continue to build a closer relationship in areas of mutual interest and encourage it to be a contributor across a broad range of issues.[57]

Unfortunately, relations between the U.S. and Russia worsened. In 2015, President Obama stated that

> Russia's violation of Ukraine's sovereignty and territorial integrity—as well as its belligerent stance toward other neighboring countries—endangers international norms that have largely been taken for granted since the end of the Cold War.
>
> We will deter Russian aggression, remain alert to its strategic capabilities, and help our allies and partners resist Russian coercion over the long term, if necessary.[58]

However, since 2008, U.S. Army forces in Europe have been cut even further, to one Stryker brigade and one light infantry brigade and 28,000 total troops. This substantial reduction in U.S. Army posture in Europe may have significant strategic implications for the ability of the United States to deter and to help U.S. allies resist Russian aggression.

Although the ground forces still forward stationed in Europe could be used to reinforce the Baltic states, we estimate

that these forces alone would be insufficient to prevent the rapid overrun of Estonia, Latvia, and Lithuania.[59] To prevent the rapid overrun of the Baltic states, NATO—and the United States—would need to station three armored brigades and supporting forces in the Baltics.[60] In concert, three NATO infantry brigades and one Stryker brigade would need to be deployable on short warning.[61]

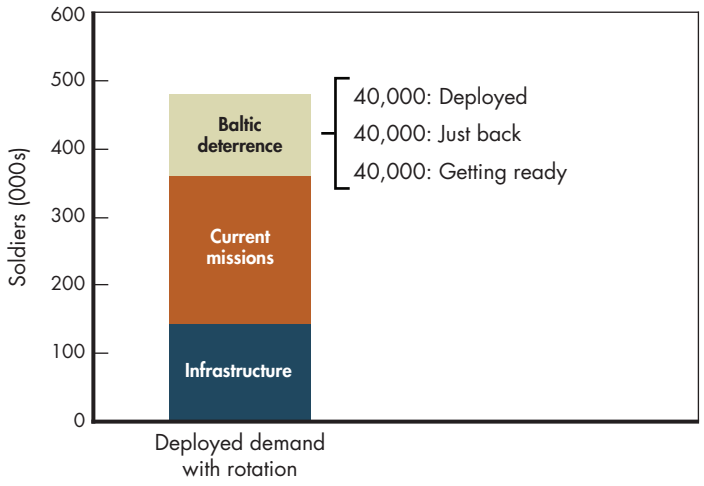
Ultimately, either the United States or its NATO allies could provide these armored brigades. However, U.S. NATO allies have drastically reduced their ground forces. Even the most capable of them—including the United Kingdom, France, and Germany—are unlikely at present to be able to maintain a ready armored brigade on deployed status indefinitely.[62] In the near term, then, the United States would have to provide the three armored BCTs, along with the forces directly commanding and supporting them. As the deployments extend over time, the number of component companies, battalions, brigades, and supporting units that U.S. NATO allies provide could probably be increased.

The armored brigades are only part of the required ground force. A division headquarters—with a battle staff able to command a joint and combined-arms fire and maneuver operation—would also be needed. In addition, the ground forces will need air defenses, aviation, combat engineering support, logistics support, and the other requisite capabilities for sustaining a large-scale ground operation. In recent operations, for every soldier in a combat division, the United States has actually had to deploy an equivalent of 2.1 total soldiers to account for other theater and supporting forces fulfilling theaterwide combat and support roles.[63]

On average, the new three-battalion U.S. Army BCTs consist of 4,500 soldiers.[64] Maintaining three armored BCTs in the field, along with the Stryker and three infantry brigades, requires 40,000 soldiers in addition to those already stationed in Europe or on rotational deployment. These ground forces would be supported by air and sea power from the Unites States and U.S. NATO allies. Figure 4 builds on the currently committed forces indicated in Figure 3 and illustrates the additional forces needed to deter Russian aggression if deployed on rotation, as discussed earlier.

If executed rotationally, the mission to deter Russian aggression would require 120,000 soldiers—40,000 deployed; 40,000 just back from deployment; and 40,000 getting ready to deploy (Figure 4). These numbers could be reduced to just 40,000 total soldiers if they were deployed forward rather than being on rotation. Including this deterrent force, approximately

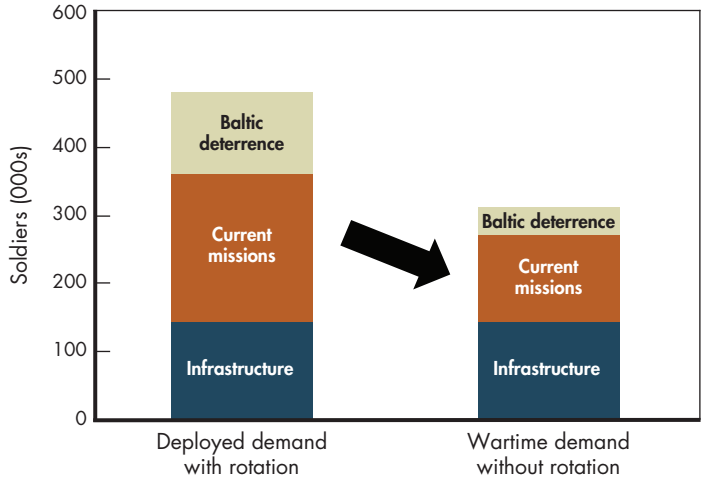
Figure 4. Army forces needed to deter aggression in the Baltics



480,000 soldiers are required to satisfy the combined infrastructure, current missions, and Baltic deterrence demands.

Figure 5 describes the effects of eliminating troop rotations, for example, during wartime. If we eliminated all rotations in the current missions and the Baltic deterrence force, total demand could be reduced to 310,000 soldiers. For the remainder of this discussion, we will consider demand in terms of the first and subsequent years of wartime, when the DoD may be compelled to impose stressful troop deployment lengths and frequency to satisfy the demand for ground forces. Thus, for the graphics that follow, we will use the bars on the right—wartime demand—as the building block.

Figure 5. Ending troop rotations reduces demand

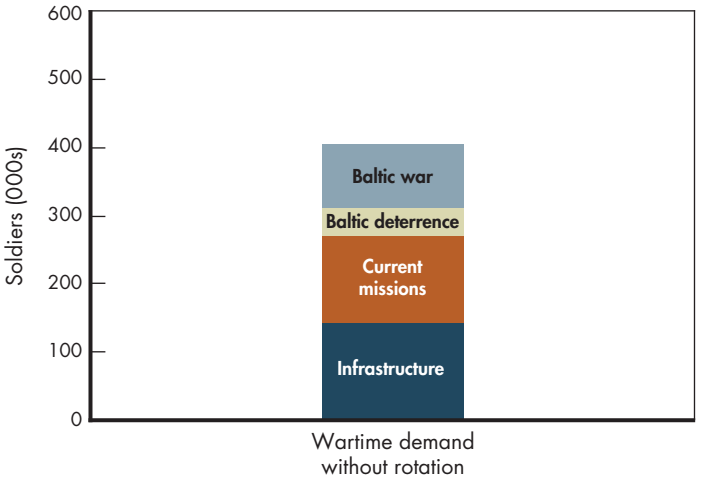


If deterrence fails, and Russia attacked the Baltic NATO nations, the early entry forces could be surrounded, and additional forces would be necessary to restore lines of communication to the Baltic capitals. We estimate that an additional 14 brigades and their accompanying enablers will be needed, with perhaps six brigades and 86,000 total soldiers coming from the United States, and eight brigades and a similar number of troops from U.S. NATO allies, along with supporting air and sea forces.[65] The additional six BCTs and 86,000 U.S. soldiers needed to reinforce the brigades stationed in the Baltics are shown in Figure 6. This includes troops providing higher headquarters battle staffs, aviation, air and missile defense, logistics, medical, engineering, and other echelon-above-brigade combat and support functions.

Mitigating the Dangers of "Loose Nukes" in North Korea

As time goes on, a conventional North Korean invasion seems increasingly unlikely because the South Korean Army would enjoy the advantages of the defense with U.S. ground forces and airpower in support. However, a conflict with North Korea could begin with a series of escalations that end in an artillery barrage of Seoul that would necessitate offensive operations. Given the scale of the North Korean artillery threat and the potential use of WMD, once a barrage began, it would almost certainly be necessary for South Korea to evacuate large portions of Seoul. Permanently eliminating this artillery threat would likely be a precondition for returning home, meaning that North Korean artillery would need to be pushed back 50 to 100 km or more to be out of range.

Figure 6. Army forces needed to defeat aggression in the Baltics



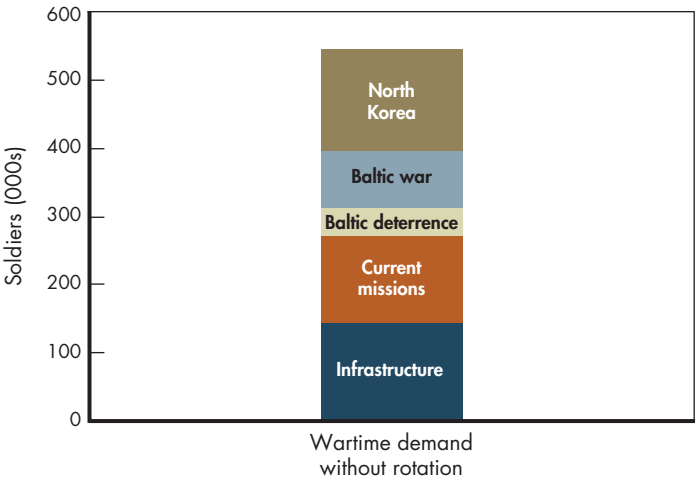
While long-range U.S. and South Korean air and missile fires might reduce the firing rate of North Korean artillery, the elimination of a barrage threat could not be guaranteed until ground forces were employed to seize and secure their firing positions, most of which are in fortified bunkers and collocated with the largest concentrations of North Korean ground forces. This would be a massive undertaking, requiring a general offensive along the length of the border and involving large numbers of South Korean and U.S. troops. These troops would have to be prepared to face chemical and perhaps nuclear weapons employed to slow their advance. Any North Korean employment of WMD might cause the United States and South Korea to push further north to eliminate these weapons and the continuing threat they may pose to South Korea, Japan, and the United States. It would be safe to assume that the total size of the U.S. ground commitment could be similar to the U.S. Army deployments to OIF—we estimate approximately 188,000 soldiers.[66]

Alternatively, North Korea might suddenly collapse—either as a result of war or the failure of its economy and government. After such a collapse, a key U.S. concern would be to find, seize, secure, and remove its WMD, in particular its nuclear weapons. In such an event, the greatest burden would likely fall on U.S. forces to eliminate these weapons. South Korean forces would likely be focused on eliminating the North Korean artillery threatening Seoul, establishing political control over captured territory, addressing the massive humanitarian catastrophe that is certain to accompany a collapse, and neutralizing any North Korean military units that choose to oppose South Korean operations.[67] Chinese forces might also enter North Korea—for example, coming south to control refugees fleeing north—but might not penetrate far enough to take control of many of the WMD sites believed to exist.

U.S. air, sea, and ground forces would be needed to interdict movements of WMD—especially out of the country—and protect operations from North Korean military units. U.S. ground forces will be needed to provide WMD-elimination task forces, ground combat forces to protect them, and engineering and logistics units to sustain their operations.

We estimate that a North Korean collapse would require an additional 150,000 U.S. troops over and above the forces already stationed and presumed to be available in the Asia-Pacific region.[68] The total ground force requirement would be 545,000 soldiers (Figure 7).[69]

Figure 7. Army forces needed to eliminate WMD after North Korean collapse



Assumptions and Constraints in Analysis of Demand

Before we proceed, it is important to note some of the key assumptions that we have made in our analysis of demand. The Army and Marine Corps must grapple with a host of constraints that will limit their ability to supply the numbers of ground forces demanded. In this section, we will quickly describe our assumptions about the demand for ground forces and some of the constraints on supply that have emerged in past operations.

Simultaneity

It is far from certain that the United States will face both Russian aggression against U.S. NATO allies and a North Korean attack or collapse at the same moment. However, it is prudent to consider such simultaneous demands, both as a "stress test" and to hedge against an adversary taking advantage of a perceived opportunity when U.S. forces are focused elsewhere. The QDR 2014 approach to deal with more than one large contingency at the same time is "Win–Deny/Punish," in which a combined-arms force wins the first conflict, and a limited force—perhaps one not including U.S. ground forces—denies an adversary his objectives (or otherwise punishes him) in a second war.[70] When the first contingency has been won, troops could then flow to the second contingency.

This concept was plausible in the BUR because the illustrative planning cases featured conventional ground invasions against allies that had their own ground forces and could trade territory for time, during which the U.S. Air Force would attrit the enemy ground formations.[71] Unfortunately, this approach is not applicable in the scenarios we assessed. The Baltic nations—even assisted by the light NATO forces that could rush to their aid—have neither enough ground forces to stop the Russians nor enough geographical depth to expose Russian tanks to U.S. air attacks long enough for their assault to be broken. To make matters worse, U.S. aircraft would themselves be exposed to sophisticated air defenses covering most of their ingress routes. In South Korea, the biggest threat may now be a North Korean artillery barrage. Long-range air and artillery fires are unlikely to be sufficient to silence this barrage, given the thousands of hardened, underground bunkers from which they are believed to operate. While a mission to secure loose nuclear weapons after a North Korean collapse could conceivably wait until U.S. ground forces become available, the longer that operation is delayed, the greater the opportunities to steal, hide, and smuggle weapons off the peninsula for sale to others.

An alternative approach is to have a joint combined-arms force—including ground forces—ready for two major contingencies. This approach reduces the danger that the United States will run out of ground forces in the first contingency that happens and reduces the incentive for an adversary to strike when the United States is at war elsewhere. However, it requires more money and personnel to maintain the larger force required.[72]

Deterrence

Our analysis assumes that deterrence requires an Army force sufficient to prevent overrun of the Baltics. (Note that the force we have assessed is not enough to defeat a Russian invasion, but

The Army and Marine Corps must grapple with a host of constraints that will limit their ability to supply the numbers of ground forces demanded.

it would offer a serious enough fight that it could plausibly hold out until reinforcements could arrive.) It is possible that other options exist. For example, the United States might be able to successfully threaten to employ economic sanctions or other military actions to dissuade Russia from attacking. However, such "punishment" or horizontal escalation strategies are also uncertain of success. A full analysis of how to deter Russia is beyond the scope of this report, and we acknowledge that how the United States should deter Russia remains an open question. We have chosen the most direct means of deterrence: Make it expensive for Russia to try to take the Baltics, certain that they must start a war with the United States and perhaps all of NATO to do so, and make it very uncertain that Russia will succeed.

Wartime Replacements, Reserve, and Rotations

We conducted the force-sizing analysis that follows using a rotational model for deployment during wartime. We found that, absent an increase in end strength, units would have to deploy for 15 months with very few troops available to provide an opportunity to rotate these soldiers home. An alternative approach is to keep Army units deployed for the duration (while perhaps taking small units of soldiers off the line temporarily but keeping them forward deployed, as needed). Yet another approach is to keep unit "flags" deployed but to rotate individuals. The relative merits and risks of these approaches have been the subject of some discussion within DoD in recent years.

Ultimately, if one or more contingencies happen, the Army will be compelled to do whatever it must to meet the demand for soldiers. Our simplified analysis treats the availability of fresh soldiers in a second year as a potential source of troops to serve as replacements and a reserve to cover some demands and constraints that we have not directly assessed. These demands and constraints include the following:

- **Replacements for casualties.** Units will experience casualties in combat that must be reflected in the expected demands for troops over time. For example, the Army held 12,000 injured and wounded soldiers within warrior transition units during the troop surge in Iraq.[73] North Korean and Russian military forces—given their size, motivation, equipment, geographical advantages, and other factors—could inflict many more. U.S. forces would therefore require access to a pool of new troops to replace those lost to death, battle wounds, and other injuries.
- **Replacements for friction.** Line units can have soldiers unable to deploy for dozens of reasons, including health issues (not accounted for in warrior transition units above), family readiness issues, certain Uniform Code of Military Justice infractions or other legal issues, because they have not completed the training needed, or have deployed too recently. During operations in Iraq and Afghanistan, approximately 10 percent of soldiers in deploying units were nondeployable at any given time.[74] If the same friction factor were applied to this analysis, another 40,000 ground troops would be needed to meet the combined mission requirements estimated here. Once again, backfilling these troops requires access to additional soldiers from units not yet committed to deploy.
- **Reserve for harder fights than expected**. We assumed that the forces we estimated would be sufficient to achieve U.S. objectives in each of our exemplar missions. These fights could grow in size or be harder than expected. Winning these fights could require more forces and/or a different mix of specialties than first anticipated. DoD will need some flexible reserve pool of units and troops that can be tapped to meet such increases in demand.
- **Rotational relief.** It is unknown what effects the high deployment tempo and other measures will have on the ability of the Army to maintain its high performance standards and its end strength. Some rotational relief may be needed to ensure that the All-Volunteer Force remains viable if contingencies stretch into a second or third year (or longer).

Readiness and Mobilization

The level of ground force utilization depicted here would put extraordinary pressures on Army readiness. Essentially, our analyses assume that every active soldier is ready for deployment and that every reserve component soldier can be mobilized in either the first or second year of the conflict. (Total mobilization is something the United States has not done since World War II.) Prior to deployment to OIF or OEF, Army brigades underwent a major readiness exercise. In FY 2015, the two U.S. combat training centers (Fort Irwin, California, and Fort Polk, Louisiana) had a combined capacity of 21 such exercises each year. Keeping 30 active and five reserve component BCTs ready to go today—if ready means having had a major readiness exercise within the past 12 months—exceeds the peak capacity of these centers and may reduce the number of bri-

gades available at the beginning of a conflict.[75] (An additional center exists at Hohenfels, Germany, but it will likely remain busy training NATO partners.) Prior to deployment, additional preparation days are required for reserve component units, which may decrease their availability early in a conflict and may slow the speed of deployment of newly mobilized units. In OIF and OEF, Army National Guard BCTs required between 118 and 165 days of preparation (including days expended per unit both pre- and postmobilization) prior to arriving in theater. Army Reserve and National Guard enabler units at the company level could be prepared more quickly, averaging between 87 and 102 days of preparation.[76]

Ground Force Fungibility

We have implicitly assumed in this analysis that soldiers and marines—irrespective of military occupational specialties and unit types—are interchangeable and can be applied to any mission. In reality, artillerymen cannot be instantaneously substituted for infantrymen, medical service corps troops, aviators, etc.—and neither can any of the other types substitute easily for artillerymen. At any given time, the Army and Marine Corps provide the mix of specialties and unit types that they believe will best meet their own mission demands. If a conflict were to require more armored units, air defenders, and artillerymen than expected, it would take some time to change the force mix—through retraining and growing new units—to reflect the new needs. The Army will be particularly stretched in this fashion because it provides the broadest range of occupational and unit types. This is a special type of friction that must be added to the frictions mentioned above.

High-Priority Missions

The Army provides critical capabilities across high-priority missions not specifically addressed in this analysis. For example, the U.S. Army provides the largest service share of the 66,000 SOF employed around the world, as well as critical air- and missile-defense capabilities, such as the Patriot units operating in Turkey and the Persian Gulf and the Theater High-Altitude Area Defense units operating in Guam. Both the Army and the Marine Corps also provide forces that can respond quickly to rapidly developing crises: the Army with the GRF based on the 82nd Airborne Division and the XVIIII Airborne Corps, and the Marine Corps with its quick-response forces based in Kuwait and Moron Air Base, Spain. Apart from the exemplar missions assessed here, demand for each of these kinds of forces is likely to remain strong and may actually grow. Growth in these missions would apply more pressure on the already too-small ground forces.

Homeland and State Missions

The National Guard is regularly tasked to provide support for missions in the U.S. homeland, both in its state active duty role and in its federal Title 32 role.[77] The National Guard reports that, on any given day, an average of 6,300 Guard members are supporting domestic missions.[78] These include providing relief in natural disasters and supporting special events and law enforcement missions. It is likely that state governors will want to keep some of these forces at home, even when overseas contingencies take place. Also, U.S. Northern Command may need to maintain some forces in the United States for specialized missions, such as WMD consequence management and other homeland defense missions.

Comparing the Demand and Supply of Ground Forces

The total ground force demand—recognizing the constraints the Army will have in meeting these demands, sums to approximately 545,000 troops, as depicted earlier, in Figure 7. This includes the 143,000 soldiers needed to meet infrastructure needs and the 402,000 soldiers needed to meet contingency requirements. The Army could meet this demand in the first year of a contingency if it could deploy 249,000 soldiers out of its planned 307,000 operating force.[79] This requires more than 80 percent of the operating force to be ready for war immediately. In addition, this plan would require that 86,000 reserve component soldiers be ready immediately and that 67,000 active and reserve component marines be deployed (Figure 8). See Tables 2 and 3, which illustrate the available forces given end strength, BOG:dwell, and other demands for personnel.

However, only 58,000 active and 86,000 reserve component soldiers and 67,000 marines would be available to serve as replacements, to serve as reserves if more troops were needed, or to allow the first-in troops to rotate out of combat if deployments continued into a second year. This constitutes a serious shortfall in the U.S. capacity needed to sustain troop deployments to these contingencies.

Ground force deployments might continue to these contingencies even if the fighting phase of the conflict ended within

Figure 8. One-year surge capacity using all planned soldiers and marines

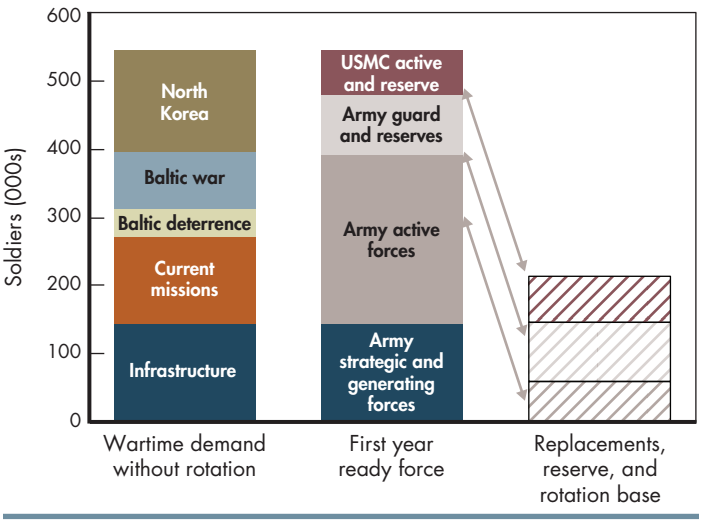


Table 2. Available reserve component soldiers

	Army National Guard	U.S. Army Reserve
End strength	335,000	195,000
Generating force	35,500	48,500
Trainees, transients, holdees, students (TTHS)	2,000	12,000
Operating force	297,500	134,500
Available at 1:4 BOG:dwell	59,500	26,900

SOURCES: Army posture statements for 2003, 2009, 2010, 2011, and 2012; Office of the Assistant Secretary of Defense for Personnel and Readiness, *Defense Manpower Requirements Report: Fiscal Year 2015*, June 2014; Congressional Budget Office, 2009.

Table 3. Available marines

	Marine Corps	Marine Corps Reserve
End strength	184,000	39,600
Generating force	32,000	5,800
TTHS	29,000	—
Embassy security forces	2,450	—
Operating force	120,550	33,800
Available at 1:1(AC)/1:4(RC)	60,275	6,760

SOURCES: Office of the Assistant Secretary of Defense for Personnel and Readiness, 2014; U.S. Department of State, Bureau of Diplomatic Security, *United States Marine Security Guards: Safeguarding American Missions Around the World*, Washington, D.C., November 2013.

the first year. In the Baltics, for example, U.S. forces might remain after expelling the Russians to ensure that they did not return and resume fighting as soon U.S. forces left. In a Korean collapse scenario, forces would likely remain long enough to find WMD, their component materials and production facilities, and the personnel associated with these activities. Both types of operations might require significant numbers of forces to remain long after kinetic operations conclude.

Additional factors we mentioned earlier might increase demand. Demand could rise if conflicts are harder, longer, or bloodier than planned. Therefore, some reserve will be needed from which to draw reinforcements if the war is harder than anticipated. And kinetic conflicts—such as operations to degrade ISIL, defeat aggression in the Baltics, or eliminate WMD in North Korea—will demand replacements for casualties and other deployment frictions. Realistically, some new troops will be needed to replace casualties, make up for frictional factors, and allow frontline troops to rest.

On the supply side, it may not be possible to deploy this many active and reserve component soldiers and marines. To generate Figure 8, we assumed that the Army could deploy 80 percent of its active component operating forces and 20 percent of its reserve component operating forces and that the Marine Corps could deploy 50 percent of its active component operating force and 20 percent of its reserve operating force. These rates exceed the maximum deployment percentages in any given month during the combination of OIF and OEF. In OIF and OEF, during the month in which each service contributed its *maximum* percentage of troops, the Army and Marine Corps deployed the following percentages of each component's end strength:

- 30 percent of the Army active component
- 19 percent of the Army National Guard
- 15 percent of the Army Reserve
- 31 percent of the Marine active component
- 26 percent of the Marine Corps Reserve.[80]

Furthermore, the *average*—as opposed to the *maximum*—deployment rates of Army and Marine Corps troops from March 2003 through September 2011 were still lower. This

covers the period of major combat operations in Iraq through the beginning of the Iraq drawdown.[81] In OIF and OEF, in an average month, the Army and Marine Corps deployed the following percentages of each component's end strength:

- 23 percent of the Army active component
- 11 percent of the Army National Guard
- 9 percent of the Army Reserve
- 16 percent of the Marine active component
- 16 percent of the Marine Corps Reserve.

Filling Gaps in Supply of Ground Forces Needed

To increase the numbers of soldiers and marines available (and fill the gaps), one or more of the following approaches could be used.

- **Grow the Army and Marine Corps Active and Reserve Components.** During the combination of OIF and OEF, the Army active component grew by 85,000 soldiers in the nine years from 2001 through 2010.[82] The end strength of the reserve components fluctuated considerably but added a net total of 11,000 soldiers over the same period. In the best of these years (FY 2008), the Army added 22,000 soldiers in the active component and 14,000 in the reserve components. Over the same period, the Marine Corps increased by 24,000 active component marines, 12,000 of these in 2008.
- However, while growth can be an important part of an overall strategy, even the best growth year experienced (2008) provided 34,000 active and 11,000 reserve troops. At a 1:1 active BOG:dwell ratio and a 1:4 reserve BOG:dwell ratio, this would yield 19,000 additional troops that could be maintained on deployment each year. At this rate of growth, it would take several years to close the shortfall in ground forces for the missions considered, not counting the additional time required to organize, train, and equip new brigade-sized units.
- **Increase Ground Force Size Ahead of Contingencies.** To add the number of deployed troops needed, either 190,000 additional active-component troops would be needed (if deployed for 12 months) or 475,000 reserve component soldiers (if utilized at 1:4 BOG:dwell). Although doing this is perhaps the most certain way of providing the needed troop numbers, this may also be the most expensive.
- **Increase Deployment Length**. Finally, the length of deployments can be increased. Assuming an ever-longer deployment means each soldier and marine will have to remain effective longer in a dangerous and difficult operation. Still, this may be what the nation is forced to ask its ground forces to do if it does not sufficiently size them for commitments.

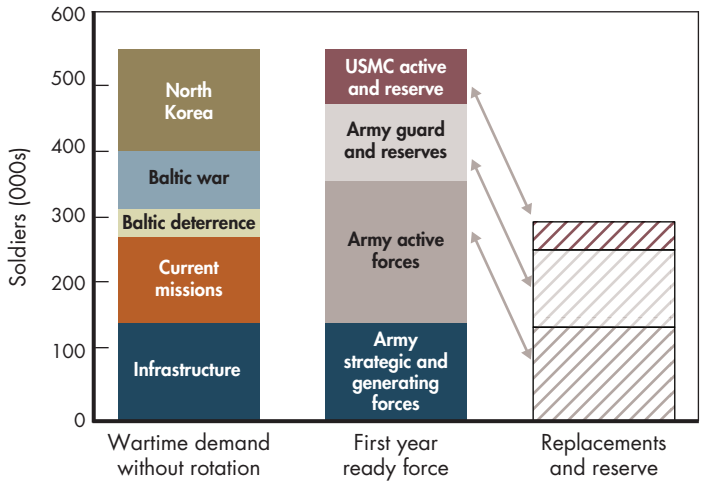
Figure 9 shows just one example of the many possible combinations of these measures to meet demand.

In this example, the planned drawdown in Army end strength is paused, and Army and Marine Corps end strength is maintained at the planned FY 2015 level. That provides 490,000 Army active components soldiers, with the Army National Guard and Army Reserve at 350,000 and 202,000, respectively, while the active Marine Corps end strength is at 184,000 and the Marine Corps Reserve is at 39,000.[83]

We then set the deployment length for active ground forces at 15 months for sizing purposes, leaving only nine months for soldiers to return from the theater, reset, train, and return to the theater between deployments. The deployment length for the reserve components is set to 12 months, and their BOG:dwell rate is set at 1:3. This would allow the Army to provide 209,000 soldiers from its active and 114,000 from its reserve components and the Marine Corps to provide 79,000 marines from its active and reserve components. This would provide the 402,000 troops needed for the contingency deployments shown in Figure 9.

With the measures examined in this case, more troops would be available to serve as replacements, to serve as a reserve if required to meet harder-than-expected mission objectives,

Figure 9. Example—adjusting force size and deployment length to meet the gap



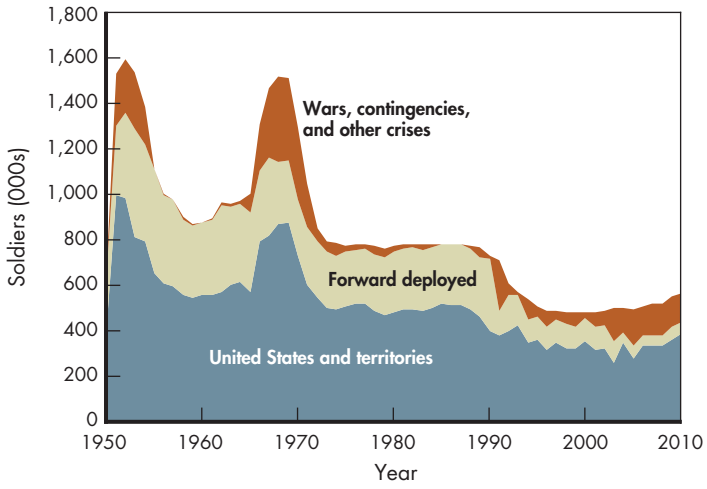
or to provide some rotation relief, as shown in the right-hand bar of Figure 9. These include 138,000 soldiers from the Army active and 114,000 from Army reserve components and 41,000 marines from the Marine Corps active and reserve components. This is not enough to rotate all the first-year forces, even if no replacements or reserves were needed, but can significantly help the DoD sustain deployments over time.

The active and reserve component end strength could then be grown—perhaps at the maximum annual growth rates achieved during OIF and OEF mentioned above—and might allow some greater degree of troop rotation in subsequent years.

It is important to note that all existing soldiers are assumed to be available for the missions considered. New global crises, state missions, or national emergencies in the homeland would be an additional demand on U.S. active and reserve forces.

With all these measures in place, 209,000 active component soldiers would be deployed to contingencies out of a total active component of 490,000 soldiers—for a ratio of 43 percent. To put this ratio into perspective, it represents significantly more soldiers deployed to contingencies as a percentage of active-duty end strength than the United States has sustained in past periods of conflict (Figure 10).[84] During the Korean War for example, the Army had 230,000 soldiers deployed to Korea in September 1951. As a percentage of the total, the Korea deployment at that time represented roughly 15 percent of the Army active-duty strength of over 1.5 million. (It is notable that nearly 1 million soldiers were in the United States providing a training, replacement, reserve, and rotation base). Similarly, in 1968, deployments to Southeast Asia represented 25 percent of Army active-duty end strength. As mentioned earlier, the Army deployed 30 percent of its active-duty forces for the major combat operations phase of OIF and deployed 27 percent of its active-duty end strength to the combination of OIF and OEF in 2008.[85] These wars were each difficult and placed enormous stresses on soldiers and their families. However, the conflicts in our example case would pose still greater difficulties and stresses.

Figure 10. Active-duty Army utilization, 1950–2010



WHAT ARE SOME ALTERNATIVE APPROACHES TO LIMIT REGRET?

The estimates presented in this report indicate that the United States has insufficient ground forces—from both the Army and Marine Corps—to face continuing demands to "degrade or destroy" violent extremist groups, such as ISIL, deter or defeat Russian aggression against NATO Baltic nations, and defeat North Korean attacks or eliminate "loose nukes" in a collapsed North Korea. The United States would not have the ability to meet these demands unless we make some changes, such as those presented in Figure 9. Not being able to meet the demand posed here would lead to regret.

What can we do to limit regret? First, policymakers could simply acknowledge that we will be unable to commit U.S. ground forces to more than one big conflict at a time and accept the regret that may come with failing to meet other commitments the United States has made to its allies. For example, if Russia began to make menacing moves toward the Baltics and if the United States committed its ground forces to this contingency, the forces would then be unavailable to help South Korea or to secure loose nuclear weapons. The opposite example would also pose a dilemma: If a Korean contingency happened first, the United States could commit its ground force to fulfill its treaty obligations but at the risk of Russia taking advantage of this distraction to attack the Baltic states. The United States could try to "split the difference," sending some ground forces to help South Korea while reserving some to help protect the Baltic states but without having enough to "win" in either contingency.

A variant on this approach is the concept that the U.S. would "win" in a first contingency and "hold" in a second contingency. While this approach would, in principle, allow U.S. ground forces to finish operations in a first contingency before moving to the second one, it has some potentially fatal flaws. Without armored forces on the ground in the Baltics, our

analyses indicate that NATO cannot prevent a Russian overrun of these allied states. Similarly, without sufficient ground forces in Korea, we do not believe that Combined Forces Command will have enough ground forces to stop a North Korean artillery barrage or be able to find, secure, and seize loose nukes at North Korean sites. If our estimates are correct, "win and hold" is not a viable strategy, potentially leading to a serious loss in the second contingency that may only be reversible at great cost.

Second, the United States could reduce the troops it is willing to commit to all missions and demand that allies and partners take on greater shares of the burden. But as we mentioned earlier, this approach ignores the fact that the most capable U.S. allies are currently cutting their ground forces more than we are and that they rely on U.S. ground forces for much of the combat and logistics support they receive during deployed operations.

Third, the United States could pull back from other ongoing missions that require significant forces, such as Iraq and Afghanistan, realizing this has already proven difficult to do in practice. Pulling back from current deployed counterterror operations may increase the threat that an unchecked ISIL, al Qaeda, or Taliban might pose to the United States and its allies. Pulling forces out of the Persian Gulf might encourage Iran to act more aggressively toward its neighbors.

Fourth, the United States could employ some of the mechanisms noted earlier to increase the supply of ground forces available. The most important of these would be to pause the current troop drawdown until new threats are fully addressed. As of the end of 2015, the Army will have 490,000 soldiers in its active force and 552,000 in its reserve components, but it plans to cut 40,000 active and 20,000 reserve soldiers after this year. The costs of retaining these troops could be resourced with Overseas Contingency Operations (OCO) funding, which could end when threats have diminished and the drawdown can be resumed.[86] The Army and Marine Corps could also grow end strength further once a conflict began or seemed reasonably certain of beginning. Some additional soldiers could be generated in a national emergency by imposing "Stop Loss"—that is, limiting the ability of soldiers to retire or separate—and perhaps recalling some soldiers to active duty and using Navy and Air Force troops in lieu of ground forces for some tasks. These last three options—Stop-Loss, growing end strength, and utilizing "in lieu of" forces—would yield limited additional numbers of troops, but even limited numbers may be helpful in the short term.

The fourth set of options assumes that every active component soldier is available and that every reserve component soldier is mobilized and provided for national missions. However, readiness problems are likely to emerge because the demands on the forces reflected in our analysis will significantly exceed those imposed on ground forces in the recent Iraq and Afghanistan wars. Additional resources will be needed to ensure that active and reserve component soldiers are ready for immediate deployment.

One could just accept the imbalance between stated U.S. commitments and current force planning and, in turn, accept the possibility of strategic failure and regret if the future develops as discussed here, but such an option does not seem very appealing. Of course, the imbalance in stated commitments and force planning works both ways; this means that another alternative to limit regret and strategic failures would be to reduce stated U.S. commitments in accordance with reductions in planned forces. However, implementing such an alternative would require a fundamental change in how the nation views its national security obligations and concerns.

One could just accept the imbalance between stated U.S. commitments and current force planning and, in turn, accept the possibility of strategic failure and regret if the future develops as discussed here, but such an option does not seem very appealing.

CONCLUSIONS AND RECOMMENDATIONS

Our analysis compared three of the largest U.S. national security commitments—combatting the persistent threat of terrorism, assuring allies and deterring aggression in multiple theaters, and preventing the spread and use of WMD—to U.S. force plans. We have found shortcomings for each—planning has not anticipated the scope and scale of ISIL threats or the Russian invasion of the Ukraine and the potential threat to NATO Baltic states, and the scope and scale of defeating North Korean artillery attacks or eliminating the North Korean WMD program is larger than what has been resourced. The United States has insufficient ground forces—both from the Army and Marine Corps—to meet the demands of these three missions—leaving a significant troop shortfall. Although there are some options for addressing the shortfall, some of these options are both challenging and not that palatable.

To make this shortfall potentially more serious, the contingencies outlined in this report are only the most obvious possibilities. The Army is headed for potentially dangerously low levels of capabilities and will have difficulty in meeting foreseeable challenges. But experience suggests that the most obvious threats are not the most likely to eventuate, precisely because they can be foreseen. This means that there is even less margin available for meeting unforeseeable challenges, which may be more demanding in the aggregate than those the nation and its leaders can envisage. Unforeseen events become much more problematic with a one-campaign Army because that Army could not respond without compromising deterrence in both Korea and the Baltics.[87]

Given these conclusions, to address the risks we see in meeting U.S. commitments and to limit the regret from not meeting them, we recommend that the administration and DoD do the following:

- **Pause the current drawdown of Army active and reserve component soldiers until the threat of Russian aggression against NATO states in the Baltics has receded.** These additional troops could be funded with OCO funds.
- **Resource the highest possible readiness levels in both the active and reserve components.** This should include establishing plans for mobilizing the entire National Guard and Army Reserve—something the nation has not done since World War II. The Army should regularly test the readiness of complete active and reserve units.
- **Increase the Army's ground force posture in the Baltics and South Korea to speed deployment times.** This would entail building the war-supporting infrastructure required, maintaining armored brigades and supporting forces in the Baltics, and assessing a variety of options to rotate or permanently station them there. The United States should also consider options to preposition equipment in both the Baltics and Korea as a deterrent and to speed deployment.

Experience suggests that the most obvious threats are not the most likely to eventuate, precisely because they can be foreseen.

These challenging recommendations represent the best alternatives for bringing U.S. force planning into accord with stated U.S. commitments and, thus, limiting the regret of strategic failures down the road.

Notes

[1] The work described in this report is based on more than three decades of published RAND national security research and expertise. In addition to the published work cited in this document, insights from RAND's wargaming and theater-level analysis capabilities inform the assessments related in the following pages.

[2] President Bush listed the following national interests: "champion aspirations for human dignity; strengthen alliances to defeat global terrorism and work to prevent attacks against us and our friends; work with others to defuse regional conflicts; prevent our enemies from threatening us, our allies, and our friends with weapons of mass destruction; ignite a new era of global economic growth through free markets and free trade; expand the circle of development by opening societies and building the infrastructure of democracy; develop agendas for cooperative action with other main centers of global power; and transform America's national security institutions to meet the challenges and opportunities of the twenty-first century." George W. Bush, *National Security Strategy*, Washington, D.C.: The White House, September 2002, pp. 1–2.

[3] Barack Obama, *National Security Strategy*, Washington, D.C.: The White House, 2015, p. 2.

[4] Obama, 2015, p. 2.

[5] John McHugh, and Raymond T. Odierno, *Army Posture Statement 2014*, Washington, D.C.: Headquarters, Department of the Army, 2014.

[6] The Army may also need significant investments in modernization to keep pace with potential adversaries. For example, new Russian and Chinese rocket artillery significantly outranges U.S. battlefield systems, thus putting U.S. forces at risk of artillery attack without being able to subject the threat systems to counterbattery fires. See John Gordon IV, John Matsumura, Anthony Atler, Scott Boston, Matthew E. Boyer, Natasha Lander, and Todd Nichols, *Comparing U.S. Army Systems with Foreign Counterparts: Identifying Possible Capability Gaps and Insights from Other Armies*, Santa Monica, Calif.: RAND Corporation, RR-716-A, 2015 (as of September 1, 2015: http://www.rand.org/pubs/research_reports/RR716.html).

[7] We will also assess how much ground forces from the Marine Corps may fill some of the gaps that we identify.

[8] Here, we are using the following definitions: "regret, *n.* . . . 3: Sorrow, remorse, or repentance due to reflection on something one has done or omitted to do." and "regret, *v.* . . . 3: *trans.* "To feel or express sorrow, distress, disappointment, etc., on account of (some event, fact, etc.); to feel sorrow, remorse, or repentance for (an action, etc.)." *Oxford English Dictionary*, 3rd ed., 2009 (as of August 30, 2015: http://www.oed.com/search?searchType=dictionary&q=regret&_searchBtn=Search).

[9] Bob Woodward, "The War Within—Outmaneuvered and Outranked, Military Chiefs Became Outsiders," *Washington Post*, September 8, 2008.

[10] Sarah Baster, "Bush Troop Surge to Stem Rise of Taliban," *London Sunday Times*, October 12, 2008; Lolita C. Baldor, "General: Urgent Need for Troops in Afghanistan Now," *Miami Herald*, October 2, 2008.

[11] Comment attributed to Admiral Michael Mullen, Chairman of the Joint Chiefs of Staff, in Bryan Bender, "Top Officer Offers a Dire Assessment on Afghanistan," *Boston Globe*, August 26, 2009. After U.S. troops in Afghanistan were more than doubled—from 33,000 to 68,000—Under Secretary of Defense Michele Flournoy stated that "We are pursuing for the first time a fully resourced counterinsurgency strategy." See Anne Gearan, "Gates Wants Review of Afghan Plan Next Year," *Washington Post*, May 20, 2009.

[12] Admiral Michael Mullen, interview, *Jim Lehrer Newshour*, PBS, July 22, 2008.

[13] Julian E. Barnes, "Gen. Petraeus Recommends Delay in Iraq Troop Cuts," *Los Angeles Times*, September 5, 2008.

[14] Michael R. Gordon and Thom Shanker, "Plan Would Shift Forces from Iraq to Afghanistan," *New York Times*, September 5, 2008.

[15] Timothy M. Bonds, Dave Baiocchi, and Laurie L. McDonald, *Army Deployments to OIF and OEF*, Santa Monica, Calif.: RAND Corporation, DB-587-A, 2010 (as of September 1, 2015: http://www.rand.org/pubs/documented_briefings/DB587.html); Defense Manpower Data Center, "Contingency Tracking System Deployment File," July 31, 2011.

[16] Troops from all the services are deployed at some ratio—which the Army describes as "boots on ground" (BOG) time in a contingent theater and the time that troops are at home ("dwell"). A 1:1 BOG:dwell ratio implies rotating for equal lengths of time between conducting the mission on the ground and being back at home. See Lolita C. Baldor, "War Demands Strain Military Readiness," *USA Today*, February 9, 2008; Tom Philpott, "Mullen: Money Crisis Will Impact Security," *European Stars and Stripes*, January 31, 2009.

[17] Elisabeth Bumiller, "Gates Says U.S. Army's Size Will Grow by 22,000," *New York Times*, July 21, 2009; Office of the Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY 2016*, Washington, D.C., March 2015.

[18] For our purposes, the *total Army* includes deployments of Army active, National Guard, and Army Reserve personnel. See Caolionn O'Connell, Jennie W. Wenger, and Michael L. Hansen, *Measuring and Retaining the U.S. Army's Deployment Experience*, Santa Monica, Calif.: RAND Corporation, RR-570-A, 2014, with updates from Defense Manpower Data Center, "Contingency Tracking System Deployment File," July 31, 2014 (as of September 1, 2015: http://www.rand.org/pubs/research_reports/RR570.html).

[19] DoD, *Quadrennial Defense Review 2014*, Washington, D.C., March 2014.

[20] This question must be answered with the recognition that the ground force is a part of a joint military capability that is one compo-

nent of national power that includes diplomatic, economic, and other measures.

[21] Of the soldiers listed, 490,000 are from the Army active component. However, the Army also had 15,500 National Guard and Army Reserve soldiers either available for mobilization or on mobilization orders. The numbers in the Figure and discussed in the text are from the following: Bonds et al., 2010; The Honorable John M. McHugh and General Raymond T. Odierno, *A Statement on the Posture of the United States Army 2015*, submitted to the U.S. Senate and the U.S. House of Representatives 1st Sess., 114th Cong., March 2015; Robert M. Speer, Assistant Secretary of the Army for Financial Management & Comptroller, briefing presented at the 2015-Washington-ASMC National Capital Region PDI 2015, March 3, 2015, with updates on Army global commitments from July 7, 2015; Office of the Assistant Secretary of Defense for Personnel and Readiness, *Defense Manpower Requirements Report: Fiscal Year 2015*, June 2014.

[22] The number of soldiers for Iraq may increase because President Obama has authorized an additional 1,500 troops for this operation.

[23] Some of these other deployed forces likely comprise foreign area officers and some of the 23,000 Army special operations forces (SOF) provided by U.S. Army Special Operations Command, although these soldiers are not separately identified. Also, some of the forces assigned to Europe, Alaska, and Hawaii participate in the rotational deployments shown. In some months, then, some of these soldiers shift among these categories.

[24] During the peak of operations in Iraq and Afghanistan, the Army deployed soldiers for one year or more, followed by a year or more at home. Deployment ratios for some soldiers in some periods reached 1:1, and some deployments were extended to 15 months followed by a one-year break.

[25] The Army often uses the terms *generating force* or *institutional Army* to describe the soldiers conducting these activities. However, these terms diminish the crucial function these soldiers play in supporting the NSS and may be used dismissively and perhaps without a careful assessment of which activities are crucial for the continuing existence of the Army or to ensure that it provides the "ways" and "means" to meet current and future national "ends." Therefore, we use the term *strategic force* to refer to the soldiers generating new concepts and forces to be ready for future missions and providing soldiers and units to support the intelligence, special operations, medical, law enforcement, and other joint missions and national activities. We use *generating force* to refer to new recruits and cadets and the soldiers who organize, train, and equip the Army. The strategic and generating forces—except for new recruits and cadets—tend to include more senior and experienced soldiers.

[26] Barack Obama, *National Security Strategy*, Washington, D.C.: The White House, 2010; Obama, 2015; DoD, 2014.

[27] On September 10, 2014, President Obama stated the following: "My fellow Americans, tonight I want to speak to you about what the United States will do with our friends and allies to degrade and ultimately destroy the terrorist group known as ISIL." Barack Obama, "Statement by the President on ISIL," Washington, D.C.: The White House, Office of the Press Secretary, September 10, 2014.

[28] On September 3, 2014, President Obama, at the Nordea Concert Hall in Tallinn, Estonia, stated: "Article 5 is crystal clear: An attack on one is an attack on all. So if, in such a moment, you ever ask again, 'who will come to help,' you'll know the answer—the NATO Alliance, including the Armed Forces of the United States of America, 'right here, [at] present, now!' We'll be here for Estonia. We will be here for Latvia. We will be here for Lithuania. You lost your independence once before. With NATO, you will never lose it again." Barack Obama, "Remarks by President Obama to the People of Estonia," Washington, D.C.: The White House, Office of the Press Secretary, September 3, 2014.

[29] Office of the Secretary of Defense, *Military and Security Developments Involving the Democratic People's Republic of Korea*, Washington, D.C., 2012.

[30] Office of the Secretary of Defense, "2000 Report to Congress: Military Situation on the Korean Peninsula," Washington, D.C., September 12, 2000.

[31] Office of the Secretary of Defense, *Military and Security Developments Involving the Democratic People's Republic of Korea 2013*, Washington, D.C., February 15, 2013.

[32] According to an article in the *Washington Post*, "South Korean officials cite Yeonpyeong as an instance in which their forces returned fire too late and too timidly—a mistake that they pledge will not be repeated. If faced with a similar attack, President Park Geun-hye has told her military, the South should strike back 'without political consideration' and without waiting for top-level approval." "South Korea's new stance is not just rhetorical. After the Yeonpyeong shelling, Seoul revised its rules of engagement, allowing front-line commanders to 'take aggressive action . . . and then report it up the chain of command,' Lee Myung-bak, South Korea's president from 2008 until this year, recently told a major South Korean daily. Lee added that the United States was initially opposed to the rule changes." Chico Harlan, "Island Attack Toughened S. Korea's Will, Seoul More Prepared to Respond Robustly to Provocations by North," *Washington Post*, April 16, 2013.

[33] Kim Eun-jung, "S. Korea Responds to North's Artillery with New Engagement Rules," Yonhap News Agency, April 1, 2014.

[34] On April 24, 2014, at the Blue House in Seoul, Republic of Korea, President Obama stated: "With regard to North Korea, the United States and South Korea stand shoulder-to-shoulder both in the face of Pyongyang's provocations and in our refusal to accept a nuclear North Korea. Threats will get North Korea nothing other than greater isolation. And we're united on the steps Pyongyang needs to take, including abandoning their nuclear weapons and ballistic weapons programs and living up to their international obligations." Barack Obama and Park Geun-hye, "Press Conference with President Obama and President Park of the Republic of Korea," at Blue House, Seoul, Republic of Korea, April 24, 2014.

[35] Chinese experts believe that North Korea may have 20 nuclear weapons now—with the capacity to build eight to ten additional weapons per year. Jeremy Page and Jay Solomon, "China Warns North Korean Threat Rising, Pyongyang Could Double Nuclear-Weapons Arsenal by Next Year, According to Latest Beijing Estimates," *Wall Street Journal*, April 23, 2015, p. A1.

[36] Thomas B. Cochran, William M. Arkin, and Milton M. Hoenig, *Nuclear Weapons Databook*, Vol. I, *U.S. Nuclear Forces and Capabilities*, Cambridge, Mass.: Ballinger Publishing Company, 1984.

[37] See Nuclear Weapon Archive, "Complete List of All U.S. Nuclear Weapons," web page, October 14, 2006 (as of August 27, 2015: http://nuclearweaponarchive.org/Usa/Weapons/Allbombs.html)

[38] Bruce W. Bennett, *Preparing for the Possibility of a North Korean Collapse*, Santa Monica, Calif.: RAND Corporation, RR-331-SRF, 2013 (as of September 1, 2015: http://www.rand.org/pubs/research_reports/RR331.html).

[39] Obama, 2010.

[40] Obama, 2015.

[41] Timothy M. Bonds, Eric V. Larson, Derek Eaton, and Richard E. Darilek, *Strategy-Policy Mismatch: How the U.S. Army Can Help Close Gaps in Countering Weapons of Mass Destruction*, Santa Monica, Calif.: RAND Corporation, RR-541-RC, 2014 (as of September 1, 2015: http://www.rand.org/pubs/research_reports/RR541.html).

[42] Bonds et al., 2014.

[43] David E. Johnson, "Fighting the 'Islamic State': The Case for U.S. Ground Forces," *Parameters*, Vol. 45, No. 1, Spring 2015 (as of August 12, 2015: http://www.strategicstudiesinstitute.army.mil/pubs/Parameters/Issues/Spring_2015/ Parameters_Spring%202015%20v45n1.pdf).

[44] Roughly 100,000 Estonian Russians, many concentrated in this region, carry a special gray passport, which labels them "aliens"—legal, but not citizens of Estonia or anywhere. See David Green, "Russian Minority Struggles in Post-Soviet Estonia," National Public Radio, August 23, 2010.

[45] According to one observer, "Russians of Narva, who make up 88 percent of the city's population, call the European Union and NATO their home. And while they may feel the emotional tug of Moscow and certainly have their grievances with the Estonian government in Tallinn, few say they want to follow the example of Crimea and join Russia." See Tom Balmforth, "Russians of Narva Not Seeking 'Liberation' by Moscow," Radio Free Europe, Radio Liberty, April 4, 2014.

[46] "Russia Reviewing Legality of Baltics' Independence from Soviet Union," Radio Free Europe, Radio Liberty, June 30, 2015.

[47] See Maksymilian Czuperski, John Herbst, Eliot Higgins, Alina Polyakova, and Damon Wilson, *Hiding in Plain Sight: Putin's War in Ukraine*, Washington D.C.: The Atlantic Council, May 2015.

[48] See Terrence K. Kelly, "Stop Putin's Invasion Before It Begins," *U.S. News & World Report*, March 20, 2015.

[49] The 2000 Russian military doctrine "allows nuclear weapons use 'in response to large-scale aggression utilizing conventional weapons in situations critical to the national security of the Russian Federation.'" Arms Control Association, *Russian Military Doctrine*, web page, May 1, 2000 (as of August 2, 2015: http://www.armscontrol.org/act/2000_05/dc3ma00). This doctrine has been raised in association with the Russian invasion of Crimea. According to CNN, "Russia was ready to put its nuclear forces on alert over the crisis in Crimea last year, such was the threat to Russian people there, President Vladimir Putin said in a documentary that aired on state TV on Sunday night. Asked if Russia was prepared to bring its nuclear weapons into play, Putin said: 'We were ready to do it. I talked with colleagues and told them that this (Crimea) is our historic territory, Russian people live there, they are in danger, we cannot leave them.' Putin said Moscow had had no choice but to act. 'Crimea isn't just any territory for us, it is historically Russian territory,' he said." Laura Smith-Spark, Alla Eshchenko, and Emma Burrows, "Russia Was Ready to Put Nuclear Forces on Alert over Crimea, Putin Says," CNN, March 16, 2015.

[50] Russia made some threats along these lines to Denmark. See Alessandro Garofalo, "Russia Threatens to Aim Nuclear Missiles at Denmark Ships If It Joins NATO Shield," Reuters Business, March 22, 2015.

[51] See Bonds et al., 2014; Bruce W. Bennett and Jennifer Lind, "The Collapse of North Korea: Military Missions and Requirements," *International Security*, Vol. 36, No. 2, Fall 2011, p. 101.

[52] Donald H. Rumsfeld, *Annual Report to the President and the Congress*, Washington, D.C.: U.S. Department of Defense, 2002.

[53] DoD, *Active Duty Military Personnel Strengths by Regional Area and by Country (309A)*, Washington, D.C.: Headquarters Services Directorate for Information Operations and Reports, December 31, 2002; Association of the United States Army, *Army 2002–03 Green Book*, October 2002.

[54] Donald H. Rumsfeld, *Annual Report to the President and the Congress*, Washington, D.C.: U.S. Department of Defense, 2005.

[55] Pete Geren and George W. Casey Jr., *Statement on the Posture of the United States Army 2008*, submitted to the U.S. Senate and the House of Representatives, 2d Sess., 110th Cong., February 26, 2008; Association of the United States Army, *Army 2007–08 Green Book*, October 2007

[56] Robert M. Gates, *National Defense Strategy*, Washington, D.C.: U.S. Department of Defense, June 2008.

[57] U.S. Department of Defense, *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense*, January 2012, p. 3 (as of August 30, 2015: http://archive.defense.gov/news/Defense_Strategic_Guidance.pdf). Emphasis in the original.

[58] Obama, 2015.

[59] See Kelly, 2015. Estimates in that article, as well as in this report, are based on a series of wargames and other analyses RAND has conducted to assess the threat Russia may pose to eastern European NATO nations. These competitive board games use playing pieces (or "counters") to represent individual NATO and Russian units, with combat strengths and other characteristics derived from analyses of actual forces. Similarly, combat and other operational results are based on substantive assessments from a body of combat simulations and analyses. The players of these games were RAND staff members, military fellows in residence at RAND, and DoD personnel.

[60] An alternative concept would be to station these forces in Poland. However, the ability of Poland-based forces to maneuver through the short common border between the Russian enclave of Kaliningrad and Russian ally Belarus and arrive in Lithuania, Latvia, and Estonia before Russian forces can overrun these countries would need to be established.

[61] These quick-response brigades include the U.S. 2nd Stryker Cavalry Regiment, the 173rd Airborne Brigade Combat Team (BCT), the BCT of the 82nd Airborne Division assigned as part of the GRF, and the newly established "Spearhead Force" of the NATO Rapid Reaction Force. See Pierre Meilhan and Steve Almasy, "NATO to Triple Size of Reaction Force," CNN, June 24, 2015.

[62] See Michael Shurkin, *Setting Priorities in the Age of Austerity: British, French, and German Experiences*, Santa Monica, Calif.: RAND Corporation, RR-222-A, 2014 (as of September 1, 2015: http://www.rand.org/pubs/research_reports/RR222.html).

[63] See COL Gregory Fontenot et al., "On POINT," Washington, D.C.: Office of the Chief of Staff, U.S. Army, 2004; Congressional Budget Office, *An Analysis of the Army's Transformation Programs and Possible Alternatives,* Washington, D.C., June 2009. During major combat operations in Iraq, a total of 183,000 Army uniformed personnel were deployed to OIF, supporting a force of five Army divisions and their equivalents. Using a standard division size of 17,300 soldiers, this yields a ratio of 2.1:1. These theaterwide forces also provided some support to the 1st Marine Division and the British 1st Armoured Division (United Kingdom)—which would imply a lower support-to-division ratio. On the other hand, the echelon-above-division artillery, air defense, combat engineering, aviation, and other supporting forces needed in a fight with the Russians are likely to be far more than those needed to defeat the 2003 Iraqi Army. In practice, some of the required forces above the division level will constitute a "fixed cost" of providing a theater combat capability; some will vary with the nature of the mission and the threat; and some will scale with the number of combat divisions deployed. All things considered, we view the 2.1:1 ratio as a fair estimate.

[64] C. Todd Lopez, "Brigade Combat Teams Cut at 10 Posts Will Help Other BCTs Grow," *Army News*, June 25, 2013.

[65] Ideally, the NATO deterrent and reinforcements would be a mix of U.S. and European forces. Although the United States may have to bear the greatest burden in the short term, that can and should change over time. The United States should be ready to provide a total of nine armored and three infantry or Stryker BCTs, four or five division and corps headquarters, and other theaterwide combat and supporting capabilities for the deterrent and reinforcements. We estimate that our European NATO allies would have to provide an equal number of combat brigades and supporting forces. This should include the NATO Response Force in the earliest stages of a crisis, as well as addition infantry, armored, and supporting formations ready to fight that could be split between the deterrent force in the Baltics and the reinforcements coming by sea or from Poland. All told, this force would be roughly equivalent to the total ground forces used by the end of major combat operations in Iraq by the of U.S. Army, Marine Corps, and the British Army.

[66] The 1993 Bottom-Up Review (BUR) estimated four to five Army divisions and four to five Marine Expeditionary Brigades, along with significant air and sea forces, would be needed to defeat North Korean forces. See Les Aspin, *Report on the Bottom-Up Review*, Washington, D.C.: U.S. Department of Defense, October 1993. For our estimate, we presume that many of the ground forces forward stationed in the Asia-Pacific would be used to supply some of these soldiers. In very approximate terms, a good starting point for the additional U.S. forces needed to counter a North Korean artillery attack would be a force of about the same size as that needed to find, seize, and secure the nuclear program. That estimate—as we shall presently describe—is 188,000 soldiers, requiring another 150,000 soldiers over those that could be made available from forward-stationed forces. This is also consistent with the 179,000–182,000 Army troops deployed to the Iraqi theater at the height of major combat operations. See DoD, *Active Duty Military Personnel Strengths by Regional Area and by Country (309A)*, Washington, D.C.: Headquarters Services Directorate for Information Operations and Reports, June 30, 2003.

[67] The demands on the South Korean army come at a time when it will be decreasing its size by one-third from its peak. See Bonds et al., 2014.

[68] Bonds et al., 2014, estimates that the total force ground force needed for WMD elimination is 188,000 soldiers. A total of 38,000 soldiers forward or rotationally deployed in the Asia Pacific would be utilized for these operations in North Korea. That leaves the need for an additional 150,000 soldiers to conduct this mission.

[69] For this analysis, we assumed that the soldiers stationed in Japan would need to remain there to defeat air, missile, and SOF threats against Japan. We presumed that all the rotational soldiers in South Korea would be available to conduct counter-WMD operations in North Korea, along with one-half of the soldiers forward-stationed in South Korea and 75 percent of the soldiers in Alaska and Hawaii. We assumed that the remaining soldiers in South Korea, Alaska, and Hawaii would perform theater air and missile defense; security; logistics; medical; reception, staging, onward movement, and integration; and other rear-area missions in South Korea and at other locations in the Asia Pacific region.

[70] The QDR 2014 force planning construct states that: "If deterrence fails at any given time, U.S. forces could defeat a regional adversary in a large-scale multi-phased campaign, and deny the objectives of—or impose unacceptable costs on—another aggressor in another region." See QDR, 2014, p. 22.

[71] See Aspin, 1993. See also DoD, 2012. The second document, also known as the Defense Strategic Guidance, takes the "win-hold-win" concept of the BUR a step further by potentially removing ground forces from the second contingency.

[72] This was the approach ultimately selected in the 1993 BUR. See Aspin, 1993.

[73] Fred W. Baker III, "Warrior Leader Describes Good Care," *MEDCOM Now*, Vol. 2, No. 12, December 1, 2008.

[74] Scott Arnold, Christopher Crate, Steve Drennan, Jeffrey Gaylord, Arthur Hoffmann, Donna Martin, Herman Orgeron, and Monty Willoughby, *Non-Deployable Soldiers: Understanding the Army's Challenge,* Carlisle Barracks, Pa.: U.S. Army War College, 2011.

[75] See Office of the Under Secretary of Defense (Comptroller)/Chief Financial Officer, *United States Department of Defense Fiscal Year 2015 Budget Request Overview*, March 2014. At a 1:5 BOG:dwell ratio, one-sixth of the National Guard BCTs should be ready at any time. Hence, five should be ready at any given time.

[76] Joshua Klimas, Richard E. Darilek, Caroline Baxter, James Dryden, Thomas F. Lippiatt, Laurie L. McDonald, J. Michael Polich, Jerry M. Sollinger, and Stephen Watts, *Assessing the Army's Active-Reserve Component Force Mix*, Santa Monica, Calif.: RAND Corporation, RR-417-1-A, 2014 (as of September 1, 2015: http://www.rand.org/pubs/research_reports/RR417-1.html).

[77] U.S. Code, Title 32, National Guard.

[78] National Guard Bureau, *2015 National Guard Bureau Posture Statement*, Washington, D.C., 2015 (as of August 7, 2015: http://www.nationalguard.mil/portals/31/Documents/PostureStatements/2015%20National%20Guard%20Bureau%20Posture%20Statement.pdf).

[79] At an active end strength of 450,000 and with 143,000 in the generating force or institutional Army, 307,000 soldiers are available for operations.

[80] Defense Manpower Data Center, "Contingency Tracking System," database, July 2012. For most service components, the maximum month occurred around May 2003—when major combat operations in Iraq were reaching their conclusion. However, Army National Guard forces peaked much later, when they were used to relieve active component forces.

[81] Several months in 2004 featured the lowest deployments of active component soldiers, presumably because of the beginning of the force rotations. These months will depress the overall averages by a small amount.

[82] Office of the Under Secretary of Defense (Comptroller), 2015; Office of the Under Secretary for Personnel and Readiness, *Defense Manpower Requirements Report,* for FYs 2001 through 2015.

[83] Department of the Army, *Fiscal Year (FY) 2015 Budget Estimates* Vol. I, *National Guard Personnel, Army*, March 2014. The 2015 National Defense Authorization Act set the Army Reserve end-strength objective at 202,000 soldiers—though the Army Reserve reported strength of slightly less than 198,000 soldiers in the Army Reserve Posture Statement. See Jeffrey W. Talley, Phyllis Wilson, and Luther Thomas Jr., *The United States Army Reserve 2015 Posture Statement—America's Army Reserve: A Life-Saving, Life-Sustaining Citizen-Soldier Force for the Nation*, 2015.

[84] DoD, *Active Duty Military Personnel Strengths by Regional Area and by Country (309A)*, Washington, D.C.: Headquarters Services Directorate for Information Operations and Reports, June 1950 through September 2010.

[85] While it is fair to say that the United States maintained significant troop levels in Europe during these periods, it is also fair to observe that the European theater served as part of the wartime rotation base for each conflict.

[86] We mention OCO funding not as a preference, but simply because such a source might be consistent with planned operations and because such a potential mechanism might allow Congress and the administration to make such a decision quickly, before these forces are cut. We estimate that maintaining 40,000 active component troops would cost approximately $6.6 billion per year in military personnel pay and operations and maintenance costs. Since these troops are already in the Service, we have neglected additional equipping or military construction costs, although such costs may arise if troops are restationed or if these forces require new equipment in the future. Estimates for the reserve troops would depend on how often they were mobilized and how many training days they were given each year.

[87] RAND colleague Ambassador James Dobbins made these points especially eloquently in his review of this report. We quote his argument here largely verbatim.

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About This Report

This report draws on publicly available materials, published RAND national security research, and RAND wargaming and analytic expertise to evaluate the U.S. Army's ability to help execute the national defense strategy against key threats. Threats we examine here include the terror threats in North Africa, the Middle East, and Afghanistan; potential Russian aggression against NATO Baltic states; and the threats North Korea poses, including "loose nukes." The inability to meet these threats with the forces the Department of Defense (DoD) provides would result in strategic failure and regret.

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The report will be of interest to DoD policymakers—particularly those who are responsible for setting and implementing national security strategy objectives and for providing the resources required to meet them. It will also be of interest to leaders of the U.S. Army and U.S. Marine Corps responsible for providing ground troops to enable the implementation of national security strategy.

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