

Rotational Deployments vs. Forward Stationing:

How Can the Army Achieve Assurance and
Deterrence Efficiently and Effectively?



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John R. Deni

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**ROTATIONAL DEPLOYMENTS VS. FORWARD STATIONING:
HOW CAN THE ARMY ACHIEVE ASSURANCE AND
DETERRENCE EFFICIENTLY AND EFFECTIVELY?**

John R. Deni

August 2017

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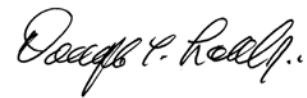
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FOREWORD

As this monograph goes to press, the Department of Defense (DoD) is wrestling with whether and how the Army is appropriately postured overseas. Judging from Congressional hearings and discussion in other public forums, there is an emerging consensus that the Army has too much of its force structure based in the 50 States today, especially if it hopes to achieve deterrence and assurance in Europe and northeast Asia. Dr. John R. Deni's study is a timely contribution to this national security conversation, combining historical perspective with clear-eyed analysis and practical recommendations for rebalancing Army posture over the next decade.

The position—literally—that the Army finds itself in today was not the result of a decision taken last month or last year. Rather, the Army's current force posture is largely the result of a vision laid out 15 years ago to return large numbers of troops from Europe and South Korea to the United States. Dr. Deni examines the many reasons for this strategic realignment, which included claims of reduced fiscal cost, increased unit training readiness, stronger diplomatic ties with partners and allies, increased family morale, and a more benign strategic environment.

Dr. Deni then skillfully examines each of these claims to see what has actually transpired in terms of the costs avoided and benefits gained. He focuses his analysis on fiscal cost, unit training readiness, diplomacy, and family readiness. Perhaps unsurprisingly for an issue so complex and nuanced, the available data is somewhat mixed across these issue areas. However, Dr. Deni finds that the preponderance of evidence points to the conclusion that the DoD could achieve deterrence and assurance more efficiently and effectively through a tailored increase in forward stationing. Specifically, Dr. Deni identifies a set of practical recommendations aimed at maximizing benefits and minimizing costs—including fiscal costs—through a rebalancing of the Army's forward posture and the end of lengthy heel-to-toe noncombat rotational deployments. These implementable recommendations are designed to enable senior policymakers to realign U.S. force posture for the next decade and beyond, in the hopes that a strategic perspective will help to avoid hasty, wasteful decisions on where and how the Army is configured abroad. The U.S. Army War College's (USAWC) Strategic Studies Institute (SSI) is pleased to offer this study as a contribution to the unfolding national security debate about the role of the U.S. military abroad and in the implementation of American foreign policy.



DOUGLAS C. LOVELACE, JR.
Director
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Finally, the author is also grateful to his colleagues at the Strategic Studies Institute (SSI) of the U.S. Army War College. Collectively, they have helped to build and sustain a collegial and intellectually rewarding work environment, one where there are plenty of open doors and always somebody to bounce ideas off of. In particular, the director of the institute, Professor Doug Lovelace, Jr., continues to foster an organizational culture of strategic-level scholarly inquiry and critical analysis, without regard to the occasional overturning of institutional rice bowls.

ABOUT THE AUTHOR

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One day, historians will look back at what is being done today [with regard to reduced overseas presence] and say that our actions helped to make the world more peaceful, our military more formidable, and our freedom more secure.¹

— Donald Rumsfeld

EXECUTIVE SUMMARY

For the purposes of efficiently and effectively assuring allies and deterring adversaries in Europe and on the Korean Peninsula, the Army's force posture is out of balance today, with insufficient units and Soldiers stationed overseas. Since the end of the Cold War – during which hundreds of thousands of Soldiers were stationed overseas – the pendulum has swung too far in the direction of a U.S.-stationed Army, yielding an over-reliance on rotational deployments for continuous heel-to-toe presence to achieve deterrence and assurance effectively and at reasonable, sustainable cost.

The preceding assessment is the result of a 10-month study examining the costs and benefits – defined broadly – of rotational deployments versus forward stationing. Not all of the available quantitative and qualitative data point in the same direction. There are indeed a myriad of sometimes conflicting costs and benefits that must be considered in determining whether and how U.S. Army posture has become unbalanced and what to do about it.

In light of data and other evidence from actual rotations to Europe and South Korea over the last 2 to 3 years, the original arguments in favor of rotational presence do not appear as valid today. This recent evidence essentially undermines the claims made in 2003-2004 and again in 2010-2011 that the Department of Defense (DoD) could achieve key objectives such as deterrence and assurance more effectively and efficiently through increased reliance on Army rotational presence in lieu of forward stationing. Other key findings of this study include the following:

- There is strong evidence to support the conclusion that in the cases of both Europe and South Korea, the DoD is spending more than was originally anticipated to maintain heel-to-toe rotational presence.
 - Rotational heel-to-toe presence is more expensive than forward stationing when the units in question are armored units taking their own equipment on each rotation and when investments already made in extant infrastructure in the United States and overseas are excluded.
 - This conclusion very likely applies to other equipment-intensive units such as combat aviation brigades or air defense units.
- In terms of diplomatic or political-military factors, forward stationing is preferred by American allies overseas over rotational deployments. Allies perceive forward-stationed forces as a sign of a stronger, more enduring commitment from the United States.
 - The material benefits that accrue to host nations often mitigate the downsides associated with American military presence, such as increased noise levels.
- From a family readiness perspective, there is strong anecdotal evidence indicating both families and Soldiers are dissatisfied with the shift to a U.S.-stationed force.
 - Soldiers and families perceive they are being asked to take on many of the same hardships as for a wartime rotation, but without the moral and material rewards of a combat tour.
 - This strong anecdotal evidence appears to be reflected by lower reenlistment rates for some rotationally deployed units during the 12 months following their rotations to Europe or South Korea. However, it is premature to label this a causal relationship.

- In terms of unit training readiness, rotationally deployed units arrive in theater at a higher level of readiness for decisive action, and their very high operations tempo (OPTEMPO) allows them to maintain that level of readiness throughout their 9 to 10-month deployment. This is appealing to some senior U.S. commanders on the ground in Europe and Korea, who contend that the higher level of activity while in theater bolsters assurance and deterrence. Especially in the case of Korea, rotational deployments have brought a higher degree of stability, reducing the personnel churn that broke up crews and small teams.
 - However, it is highly unlikely that America's adversaries or its allies recognize or care about the differences between an active duty armored brigade combat team (ABCT) that has just conducted a National Training Center (NTC) rotation and one that has not.
 - Moreover, the training readiness advantages of a rotationally deployed unit are balanced out by the significantly higher manning rates of forward-stationed units and the fact that forward-stationed units typically are more knowledgeable of foreign culture, military units, geography, political leaders, and military counterparts. Forward stationing yields more interoperable, culturally proficient forces.

The DoD has begun to recognize it needs to restore balance to the Army's overseas force posture—the DoD has earmarked additional force structure for forward stationing in Europe, as part of an increase in end strength authorized by the 2017 National Defense Authorization Act (NDAA). Nonetheless, compelling evidence as presented in this study points to the conclusion that the DoD can more effectively and efficiently deter and assure through an increase in Army forward stationing beyond that which exists today.

Along these lines, the study makes the following recommendations:

1. To minimize the negative morale associated with 9 to 10-month heel-to-toe rotational deployments that lack the same moral and material benefits of a combat tour, the Army should end such rotations and instead conduct shorter-term, periodic, but regular rotations to South Korea and Europe. The Pacific Pathways initiative may provide a useful model.
2. To minimize recurring fiscal costs, the United States should forward station in Europe and South Korea heavy and/or equipment-intensive units, instead of rotationally deploying them.
3. To maximize the advantages of tactical, operational, and strategic interoperability that come with forward stationing, the United States should forward station those units that require the greatest depth of knowledge of local rules, regulations, customs, terrain, airspace, and/or counterpart units and officials.
4. In the case of Europe, the Army should forward station, for example, an ABCT as well as combat aviation, air defense, and division-level command and control units and related enablers in order to achieve sustainable deterrence and assurance.
5. U.S. forces forward-stationed in Poland—in whole, or in part, through split-basing—would provide greater assurance to Eastern Europe and more effectively deter aggression than rotational forces. Therefore, notwithstanding the restrictions

imposed by the NATO (North Atlantic Treaty Organization) Russia Founding Act and taking into consideration the significant changes in Russian foreign policy, security strategy, and force posture over the 2 decades since the signing of the Act, the DoD should pursue a policy of forward stationing additional force structure in Poland. Doing so would produce greater assurance and deterrence effects relative to stationing in Western Europe; and the Polish Government has evinced a willingness to share some of the costs of construction and base operations.

6. If forward stationing of additional, appropriate force structure cannot be achieved in Poland, forward stationing in Germany is a cost-effective alternative that would bolster assurance and deterrence through the return of armor, combat aviation, fires, command and control, and other critical enablers to Central Europe.
 - However, in this situation—and in order to control fiscal costs and negative impacts on morale—the United States should end the heel-to-toe armor presence across Eastern Europe provided by continually rotating forces from the continental United States.
 - Instead, the United States should continue to maintain heel-to-toe presence of a battalion-sized unit—sourced from forward-stationed armored, Stryker, and other forces—in Poland under NATO’s enhanced Forward Presence (eFP) initiative.
 - The constant presence of U.S.-sourced armored rotational forces elsewhere across Eastern Europe is very appealing to some field commanders, largely because of high unit training readiness and high OPTEMPO. However, this study suggests that given the array of costs and benefits associated with long duration, continuous rotational deployments, the United States could maintain adequate assurance and deterrence more effectively and efficiently by relying on occasional, short-term deployments across Eastern Europe of armor and other capabilities sourced from units forward-stationed in Europe and occasionally augmented by other short-term deployments of lighter units sourced from the United States.
7. In the case of Korea, the Army should return to a forward-stationed ABCT, and it should maintain combat aviation, air defense, and division-level command and control units and related enablers there. With the completion of construction at Camp Humphreys, the Army should also normalize tours for the ABCT and as many other units as possible, to reduce personnel churn and to reinforce the strong U.S. commitment to South Korean defense.
8. When periodic, shorter-term rotational deployments are necessary in Europe or northeast Asia, the DoD and the Army should rely on infantry brigade combat team (IBCT) or Stryker brigade combat team (SBCT) units.
9. The DoD should try to increase Army forward stationing through growth in Army end strength rather than through relocating a unit that is already stationed in the United States.
 - When the executive branch leads forcefully on these issues, it nearly always overcomes Congressional resistance, even when relocating an extant unit from a U.S. facility to an overseas location, based on historical precedent.

- In any case, the DoD will need to achieve a strong interagency consensus on the importance of increased forward presence, and it will need to continually inform Congress of the benefits in terms of morale and family readiness, fiscal cost, diplomacy, and interoperability.

Regardless of the specific overseas force posture adopted by the United States or the particular blend of rotationally deployed forces and forward-stationed forces ultimately arrayed in Europe and South Korea, the Army and the DoD must engage in a careful study of the alternatives. Analysis must precede conclusions, not the other way around. Recent history has shown that to do otherwise, for example, in order to achieve short-term objectives or fulfill myopic political imperatives, can waste taxpayer money and strategically disadvantage the United States.

LIST OF ACRONYMS

ABCT	armored brigade combat team
ACF	area cost factors
ACM	Army Contingency Operations Cost Model
AIP-OD	Army Incentive Pay for Operational Deployment
ARFORGEN	Army Force Generation
BCT	brigade combat team
BRAC	base realignments and closures
C4I	command, control, communications, computers, and intelligence
CFH	Army Cost and Factors Handbook
DEOMI	Defense Equal Opportunity Management Institute
DoD	Department of Defense
DPTA	Drawsko Pomorskie training area
EDI	European Deterrence Initiative
eFP	enhanced Forward Presence
ERI	European Reassurance Initiative
ESR	End Strength Reduction
EUCOM	U.S. European Command
FCM	FORCES Cost Model
FORCES	Force and Organization Cost Estimating System
FY	fiscal year
GAO	Government Accountability Office
HQDA	Headquarters, Department of the Army
IBCT	infantry brigade combat team
IGPBS	Integrated Global Posture and Basing Study
JIIM	Joint, Interagency, Intergovernmental, and Multinational
JRTC	Joint Readiness Training Center
KEES	Korea Enduring Equipment Set
KOR	Kaliningrad Special Defence District
MARFORPAC	Marines Corps Forces, Pacific
MILCON	military construction
MRF-D	Marine Rotational Force-Darwin
MVA	Military Value Analysis
NATO	North Atlantic Treaty Organization
NDAA	National Defense Authorization Act
NTC	National Training Center
OPTEMPO	operations tempo
PCS	permanent change of station

QDR	Quadrennial Defense Review
RSOI	reception, staging, onward movement, and integration
SBCT	Stryker brigade combat team
USAREUR	U.S. Army Europe
USARPAC	U.S. Army Pacific
USD	U.S. dollars

ROTATIONAL DEPLOYMENTS VS. FORWARD STATIONING: HOW CAN THE ARMY ACHIEVE ASSURANCE AND DETERRENCE EFFICIENTLY AND EFFECTIVELY?

INTRODUCTION

Over the last 2 decades, the Army has increasingly become a U.S.-stationed force; shifting most of its routinely forward-stationed forces back to the United States (see Tables 1 and 2). For the most part, restationing was done in order to save money, under the expectation that it would be cheaper to base U.S. Army forces in the United States than overseas. Whether and how this has been an efficient and effective use of limited resources has been the subject of significant deliberation among practitioners and academics. Until very recently, though, there was little actual quantitative data available on the costs associated with a robust Army rotational presence model, the likes of which are seen today in East Asia and Europe.

The forward posture of today's Army did not emerge suddenly or even over the course of a couple of years. Instead, today's Army posture is the product of a plan that was largely developed and put into motion over 15 years ago.

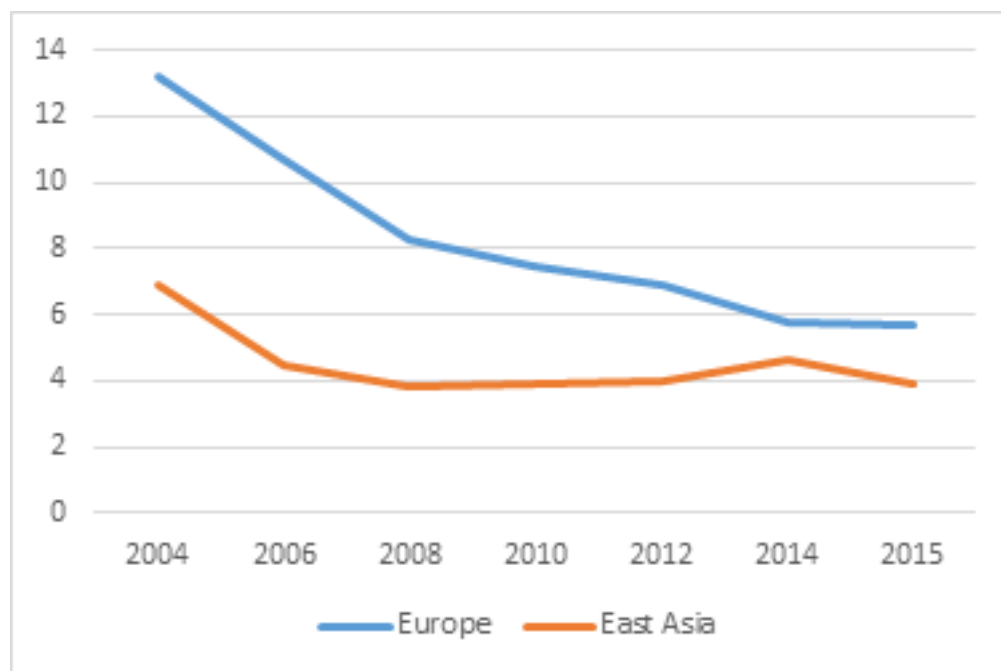


Table 1. Percent of U.S. Army Forces Stationed in Europe and East Asia.²

In order to begin planning for what the Army's posture might be 15 years from **now**, military leaders must consider the relative merits of permanent forward presence versus rotational forward presence as tools for achieving a variety of U.S. national security objectives. For instance, the Department of Defense (DoD) needs to consider whether one or the other is better at achieving deterrence and of reassuring allies and partners. Fiscal costs must of course be considered, in addition to the impact on families and troops. Political-military factors also must be weighed in trying to discern which model of forward presence achieves broad U.S. objectives. In short, there are several variables that can influence assessments of what is better.

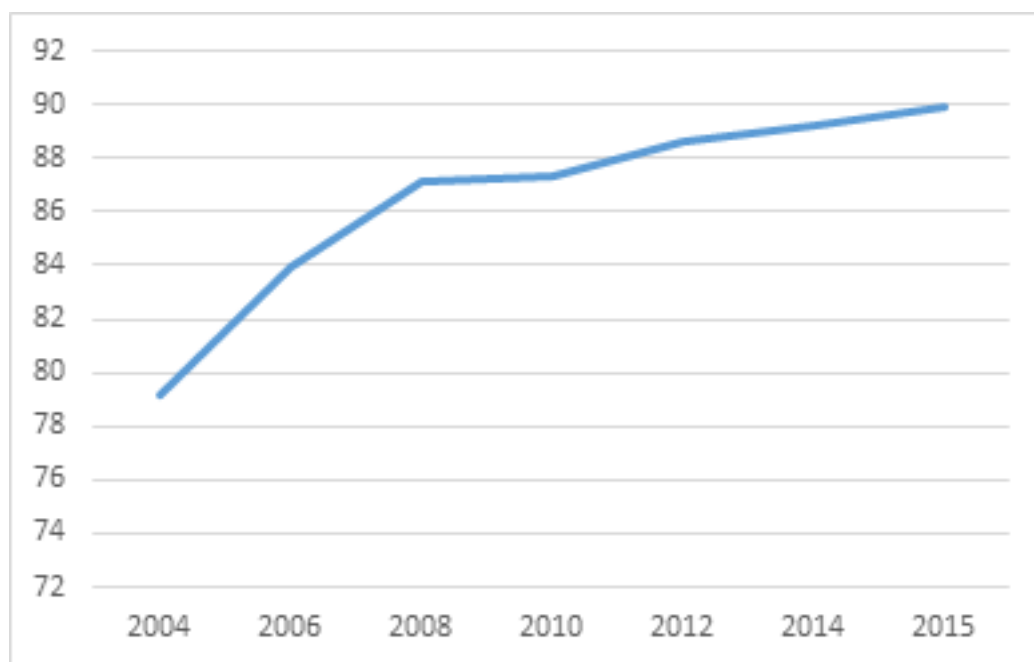


Table 2. Percent of U.S. Army Forces Stationed in the United States and U.S. Territories.³

This study examines many of these factors—that is, the relative costs and benefits, broadly defined—of recent and current fiscal year (FY) forward stationing and rotational presence efforts in South Korea and Europe. It will assess these two presence tools in the context of deterring American adversaries and assuring American allies. Although the study will be retrospective in its analysis, it will also provide a decision-making and risk assessment framework for senior defense civilians and military officials that will assist them in determining where one form of presence may be more effective or efficient than the other, depending on strategic, operational, and/or tactical objectives, as well as other factors.

This study is necessary in order to inform future presence decisions. To begin shaping the most efficacious force posture for the next decade or more, policymakers must begin

today to develop a long-term plan and build a political and organizational consensus. This study is a contribution to that effort.

Definitions and Study Parameters

As mentioned above, this study is concerned primarily with whether and how the United States employs overseas military presence to achieve two goals—deterrence and assurance (see Figure 1). It is therefore not terribly concerned with whether and how various presence models support current operations in places such as the Middle East or Afghanistan, or whether those presence models support future operational access. These are certainly important goals for the U.S. military to concern itself with, but they are outside the scope of this study.

This study treats deterrence as the ability of the United States to influence Moscow’s decision-making vis-à-vis U.S. and Allied vital interests. Specifically, deterrence is the ability of the United States to convince Moscow that likely costs outweigh the likely benefits of any aggression aimed at undermining those vital interests, however they are defined and assuming they are clearly articulated and communicated to Moscow. Deterrence can be achieved through the promise of punishment, following an act of aggression, or through denial, essentially preventing or indefinitely delaying an act of aggression.

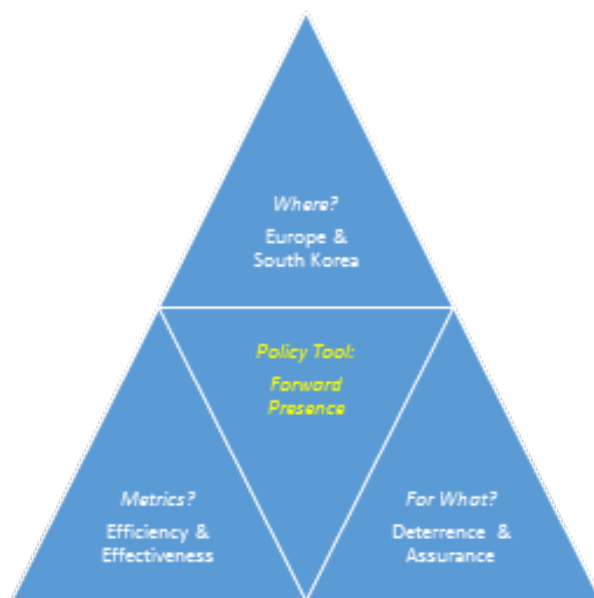


Figure 1. Study Parameters.

If deterrence is aimed at potential adversaries, assurance is aimed at allies. Assurance is treated in this study as the ability of the United States to convince allies of its ability and willingness to make good on its alliance responsibilities. Note that this comprises two necessary and sufficient elements—the first (ability) is usually thought of in terms of both capability and capacity, and the second (willingness) is typically viewed in terms of political commitment.

Obviously, neither of these concepts is easily measured in quantitative terms. In fact, it is difficult to measure deterrence even in qualitative terms. Whether deterrence is working can only be implicitly measured, based on the absence of certain policies or rhetoric—such as a military incursion—as well as the presence of other policies or rhetoric—such as leadership statements on official policy. Nonetheless, with regard to less-than-transparent authoritarian states like Russia, deterrence is especially difficult to assess.

Assurance is similar to deterrence in that it is difficult to measure in concrete terms. However, it is certainly easier to measure in qualitative terms than deterrence. For instance, public and private statements of key political leaders in allied countries can provide U.S. officials with a fairly clear sense of whether those allies are assured by U.S. actions and policies. Subjective analyses conducted by think tanks or academics can also provide Washington with a sense of whether its chosen policies and its forward posture are assuring allies. Hence, although certainly not an exact science, measuring assurance is markedly easier than measuring deterrence.

This study seeks to examine deterrence and assurance in terms of whether the United States is achieving those objectives efficiently and effectively. The first of these parameters—efficiency—involves trying to determine which presence option or options achieves U.S. objectives with fewer costs over time. This study defines costs in broad terms including budgetary or fiscal costs, human costs such as impacts on family well-being and morale, and diplomatic costs such as impacts on relationships with key allies and potential adversaries. Time is also a factor to consider here—whether a particular presence option can be sustained over time is a determinant of its efficiency.

With regard to effectiveness, this study will attempt to determine which forward presence option or options achieve U.S. deterrence and assurance objectives more easily, speedily, and/or completely. Measuring effectiveness in national security is a challenging task because, for the most part, it is nearly impossible to quantify what is inherently qualitative, such as the sense of assurance among U.S. allies. Nonetheless, measuring effectiveness has become especially popular among national security decision-makers in an era of constrained or shrinking resources—military and civilian executive branch leaders and their overseers in the legislative branch want to ensure every defense dollar is spent wisely. This demand signal can lead to at least two problematic tendencies. First, there can be a tendency to confuse the measurement of effectiveness with the measurement of performance. The latter addresses merely whether tasks or activities have been **accomplished**, while only the former addresses **how well** they have been accomplished.

The second problematic tendency is to score qualitative factors by assigning numerical values and hence manipulate them in the same way that truly quantitative data might be. This is inherently risky because it suggests a degree of objectivity and rigor that is often not substantiated. Qualitative assessment employs multiple methods, including field interviews as well as analysis of primary and secondary sources, and rests fundamentally on interpretation by critically thinking analysts. This study assesses effectiveness primarily through reliance on interpretative analysis of qualitative factors.

Finally, as noted earlier in the introduction, this study is focused entirely on forward presence in Europe and South Korea. The Army also employs a combination of rotational deployments and forward stationing in Latin America and the Middle East, but these regions are outside the scope of this study. Instead, this study confines its analysis and

recommendations to Europe and South Korea, per the terms of the study proposal made to and agreed upon by the senior Army leadership.

Methodology

This study is based on a wide variety of information sources. Personal research interviews and discussions were conducted or email correspondence exchanged with over 70 individuals from U.S. and allied military and civilian officials based in Europe, South Korea, and North America. These were greatly facilitated by research trips to U.S. European Command (EUCOM) and U.S. Army Europe (USAREUR) in August 2016; to Headquarters, Department of the Army (HQDA) in December 2016; to U.S. Army Pacific (USARPAC) in January 2017; and to 8th Army Headquarters and 2nd Infantry Division Headquarters in February 2017.

In addition to these organizations, a wide variety of others were directly contacted and engaged in the effort to find raw data, other relevant primary sources, and secondary source analyses and studies. These other organizations and entities included:

- 2nd Stryker Cavalry Regiment;
- 1st Brigade, 1st Cavalry Division;
- 2nd Brigade, 1st Cavalry Division;
- 1st Brigade, 3rd Infantry Division;
- Center for Army Lessons Learned;
- Marine Corps Forces, Pacific;
- U.S. Army Research Institute for the Behavioral & Social Sciences;
- U.S. Embassy Seoul;
- German Ministry of Defence;
- Polish Ministry of Defence;
- Canadian Embassy Washington, DC;
- United Kingdom (UK) Mission to the North Atlantic Treaty Organization (NATO); and,
- UK Embassy Tallinn.

The Way Ahead

Following this introduction, this study will next address trends in overseas stationing. Understanding when, why, and how the Army became largely U.S.-stationed is critical to determining whether the Army and the DoD more broadly are better off today—in terms of the aforementioned parameters—than before the shift. Understanding the recent history of the Army's shift can also help to inform decisions the Army and the DoD might wish to make to overseas posture moving forward.

This study will then attempt to assess whether the arguments used to justify the relocation of most of the Army's forward-stationed presence have held up in light of recent data and other evidence from the last 2 to 3 years. This time period—from late 2014 when the United States began regular rotations of U.S.-stationed units to Europe, and from mid-2015, when the United States began rotating full brigade combat teams from U.S. bases to South Korea—has yielded a great amount of evidence on fiscal costs, readiness, morale, and diplomatic implications. This section will include an illustrative cost comparison

between a forward-stationed armored brigade combat team (ABCT) and a U.S.-based ABCT. An ABCT was chosen as the unit for comparison because it is the centerpiece of the heel-to-toe rotations occurring currently in Europe. Of course, an ABCT is only one element of effective and efficient deterrence and assurance in Europe and South Korea.

Next, the study will examine what the Army might learn from other countries – and other U.S. services – that are also engaged in regular overseas rotations that are not tied to particular combat operations. The U.S. Marine Corps has, since 2012, been sending units of various sizes to Darwin, Australia for several months each year. More recently, Germany, Canada, and the United Kingdom have joined the United States as framework countries for NATO’s new enhanced Forward Presence (eFP) initiative in the Baltic States and Poland. The lessons gleaned from these rotational deployment initiatives may help to inform unfolding Army efforts in Europe and South Korea.

Finally, the study will conclude with an assessment of key findings and recommendations. The shift to a U.S.-stationed Army is having – and will continue to have – profound implications for how the Army fulfills its missions and for how the United States achieves security and stability in areas of vital interest. Assessing the situation to date is critical to positioning the Army and the DoD to make adjustments to its posture now – adjustments that are likely to unfold over many years.

TRENDS IN OVERSEAS STATIONING

The U.S. forward-stationed presence in Europe has been steadily decreasing since the early 1990s, when the Cold War ended. With the demise of the Soviet Union in December 1991, the original rationale for U.S. forward presence in Europe – defending NATO allies from a conventional attack by Soviet and Warsaw Pact forces – practically vanished. New security challenges arose in place of the Soviet threat – ethnic, religious, and socio-economic tensions that had been held in check by the bipolar security structure suddenly burst open in places such as Bosnia. Moreover, European concerns over the residual capability of a diminished but still potentially threatening Russian military – as well as the uncertain trajectory of a recently reunited Germany – meant that there would be a limit to the scope and pace of U.S. force reductions in Europe in the 1990s.

Nevertheless, even before the Soviet Union formally collapsed, the number of U.S. Army troops assigned to Europe began to steadily fall starting in the early 1990s. In some instances, such as in the case of most of the units in the Army’s VII Corps stationed in Germany, units that deployed from Europe to the Persian Gulf War redeployed directly to the United States.⁴

The drawdown of U.S. Army forces in Europe gained new momentum in 2004, with the completion of the Integrated Global Posture and Basing Study (IGPBS) and the publication of the Bush administration’s report to Congress on “Strengthening U.S. Global Defense Posture” as depicted in Figure 2.

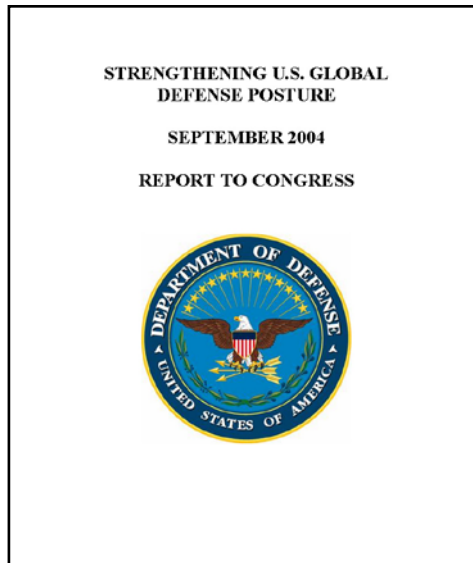


Figure 2. “Strengthening U.S. Global Defense Posture,” Report to Congress, 2004.⁵

Although most of the details of the posture plan were contained in a classified annex, the publicly released report featured the broad outlines of the restationing plan that would be largely carried out over the next 10 to 12 years.⁶ These included:

- The removal of heavy maneuver forces from Europe—this meant the return of all U.S. tank units from Europe.
- The retention of just Stryker and airborne units as the only forward-stationed ground maneuver units in Europe—ultimately, this meant that only the 173rd Airborne and the 2nd Stryker Cavalry Regiment would remain as U.S. ground maneuver units forward-stationed in Europe.
- Reliance on rotational presence to achieve a brigade combat team (BCT) presence split between Bulgaria and Romania.
- A leaner command and support structure in Europe—this entailed the return of V Corps Headquarters, 1st Infantry Division Headquarters, and 1st Armored Division Headquarters to the United States, as well as numerous combat support units.
- In South Korea, a drawdown in total U.S. forward-stationed forces from 38,500 to 25,000.
- Increased reliance on rotational units to complement forward-stationed units on the Korean peninsula.
- Consolidation of U.S. forces south of Seoul and away from its increasing congestion and sprawl.
- The maintenance of a robust prepositioned equipment capability in Korea.

Before the Bush administration ended its second term, the 1st Infantry Division Headquarters and its subordinate brigades and other units had relocated to the United States or were inactivated. Additionally, plans were announced to transfer 1st Armored Division Headquarters and most of its subordinate brigades and other units to the United States.⁷

When the former Obama administration entered office in 2009, it initially put plans for drawing down beyond that which had occurred to date on hold. This decision was captured in the 2010 *Quadrennial Defense Review* (QDR) report, depicted in Figure 3, which noted that pending “assessment of our European defense posture network, the United States will retain four brigade combat teams and an Army Corps headquarters forward-stationed on the continent.”⁸

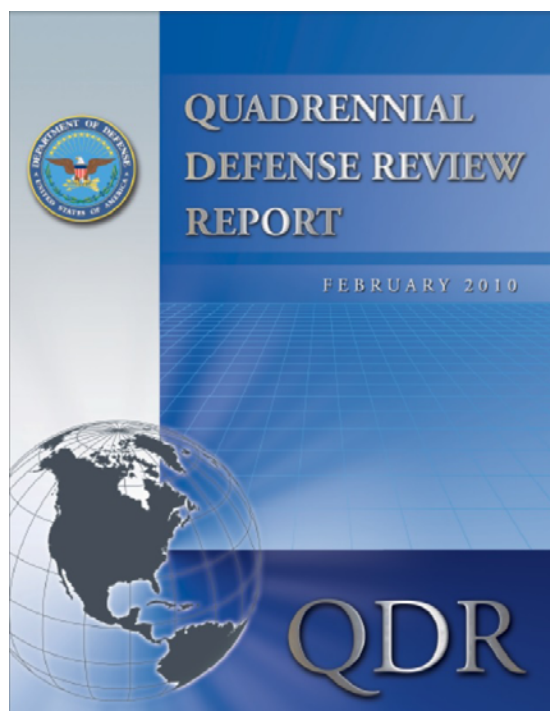


Figure 3. The 2010 Quadrennial Defense Review Report.⁹

However, not long after that, the Obama administration decided to continue with the broad outlines of the plan developed nearly a decade prior under President Bush. In Europe, this meant leaving only the 2nd Stryker Cavalry Regiment and the 173rd airborne brigade forward-stationed—in terms of ground maneuver units—and removing two other brigades (170th and 172nd) as well as V Corps and the 1st Armored Division.¹⁰ Overseas reductions were considered critical elements in the broader inactivation of Army force structure that was necessary following the passage of the Budget Control Act of 2011 and the end of major combat operations in Iraq. Using the Military Value Analysis (MVA) model and other analytical tools, the Army determined that in dropping from 45 to 33 BCTs, it would cut 2 BCTs from Europe (the aforementioned 170th and 172nd) and 10 BCTs from its force structure in the United States, as well as reorganize the remaining BCTs by, for example, adding a third maneuver battalion to most.¹¹ Later, in November 2014, the Army announced it would cut an ABCT from South Korea and replace it with a rotationally deployed brigade from the United States.¹²

At the political level, the reasons relied upon by both the Obama and Bush administrations to justify the drawdown of forces and the shift toward rotational presence, as well as the arguments used by Congressional supporters of the drawdown, were manifold.

The next section examines the most common and compelling arguments relied upon by those that favored reducing military stationing overseas, especially in Europe, in favor of increased stationing in the United States and the use of rotational deployments to maintain some degree of overseas presence.

ARGUMENTS IN FAVOR OF A U.S.-STATIONED FORCE

Fiscal Costs

It has long been generally assumed that it is cheaper to base American military forces in the United States, and throughout the last 15 years, cost factors were routinely cited as a major reason for shifting from a forward stationing posture.¹³ This is especially so relative to Germany and other European locations, where U.S. military bases include infrastructure such as schools and commissaries that may not be necessary at military facilities in the states. Per the terms of agreements negotiated with the United States, Germany and Italy also do not provide as much direct reimbursement for the presence of U.S. Army forces on their territory, certainly not to the extent spelled out in agreements with South Korea or Japan. Moreover, Pentagon officials specifically argued that permanent change of station (PCS) costs would be reduced, since the Department would not be transferring as many Soldiers and families across the ocean.¹⁴

Some in Congress questioned whether it would cost more to deploy forces from the United States in a time of crisis than it would to already have those forces stationed overseas.¹⁵ The Congressionally-mandated Overseas Basing Commission expressed the same concern.¹⁶ Executive branch officials, particularly of the Bush administration, did not think these concerns were valid given the unknowability of where American military forces would be deployed in the future.

Nevertheless, there were some serious efforts at understanding the costs involved in shifting from a forward-stationed presence to a rotational presence. Two of the earliest such initiatives came up with starkly different answers. A 2007 study commissioned by EUCOM sought to build a cost comparison between a forward-stationed Stryker brigade combat team (SBCT) and a rotationally deployed SBCT addressing procurement, operations and maintenance, personnel costs, transportation, garrison operations, medical and dental costs, military schools, and commissaries and military exchanges.¹⁷ This study, produced by WBB Consulting, attempted to capture all available costs across a 3-year period. The WBB Consulting study assumed that rotational deployments would last just 6 months, that rotating personnel would be billeted on existing bases, that rotating units would not deploy with their equipment, and that a new European equipment set would be purchased for rotating units to fall in on while in Europe. Moreover, the study assumed that sufficient infrastructure would be maintained under each of the scenarios—hence, military construction costs were not considered.

In summary, the WBB Consulting study concluded that rotationally deploying a SBCT would entail an increase of somewhere between \$275 million and \$502 million over a 3-year period. This conclusion was based on several factors:

-
- Increased procurement costs under a rotational deployment scenario of between \$379 million and \$569 million, in order to complete the equipment set that rotating units would use while in Europe.
 - No difference in operations and maintenance costs.
 - \$79 million more in personnel costs for a forward-stationed unit, due to more overseas PCS moves and higher overseas housing/subsistence/currency adjustment allowances that were not offset by deployed per diem and family separation allowances.
 - \$55 to \$92 million more in transportation costs for a rotationally deployed unit.
 - Slightly higher garrison costs for a forward-stationed unit.
 - Roughly \$59 million less in DoD dependent school costs for a rotationally deployed unit, which were only partially offset by \$24 million in U.S. Department of Education support payments to U.S. school districts attended by military school-age dependents.¹⁸

However, an earlier study conducted for the Army by RAND's Arroyo Center and published in 2003 concluded that there would be significant net annual savings associated with a posture based on rotational presence.¹⁹ This study differed significantly from the WBB Consulting study insofar as it assumed that the Army would relocate four BCTs from Germany back to the United States and subsequently rotate that same number of heavy BCTs to Germany for 6-month deployments.

In sum, RAND Arroyo estimated that relocating four BCTs from Germany would have entailed an additional \$700 million to \$830 million in one-time military construction costs at the receiving U.S. installations. Importantly though, these costs would have been offset over time through \$200 to \$350 million in annual savings from:

- Net housing allowance savings, given that allowances for units stationed in Europe are more generous than for those stationed in the United States;
- Reduced DoD dependent school costs in Europe; and,
- Fewer overseas PCS moves.

For this reason, the study concluded that the "policy [of relying on rotational presence in Europe] would pay off within 5 years of full implementation."²⁰ However, a critical assumption of this study was that unit equipment would **not** rotate with each deployment. Instead, the authors suggested that equipment sets—estimated at roughly \$2.8 billion per BCT²¹—would need to be pre-positioned in Europe, or some other creative arrangement arrived at in order to facilitate the rotations. Although the RAND Arroyo Center factored one-time military construction costs into its 5-year-maximum payoff calculation, it did not include the \$2.8 billion one-time equipment costs per BCT—doing so would have lengthened the payoff period to somewhere between 24 and 44 years.

The Security Environment

With the demise of the Soviet Union, the international security environment had fundamentally changed. The Soviet threat was replaced with a broader range of security challenges, including terrorism, proliferation, and ethno-religious conflict. Some thought

that the era of mass military formations located at static main operating bases reflected an outmoded, industrial-age view of the world characterized by near-peer, state-based security challenges. State-based security threats were still expected to exist, but they would be joined by three other types of challenges: irregular, catastrophic, and disruptive.²²

For this new array of challenges, lighter, smaller formations were viewed as more capable and appropriate in the 21st century. In the words of one senior Pentagon official at the time, “We no longer need heavy maneuver forces as the central element of our defense posture in Europe.”²³ Secretary of Defense Rumsfeld was as categorical in casting an even broader net: “The 21st century does not call for the permanent deployment of heavy forces.”²⁴ Others argued plainly that “great powers have little incentive or interest in expanding further.”²⁵

Usability

Through operations in Bosnia, Kosovo, and then Iraq, it became clear to decision-makers in the Pentagon that U.S. forces were conducting an increasing number of operations beyond their forward-stationed locations. This took on a more problematic character in the run-up to the Iraq war in early 2003, when U.S. forces forward-stationed in Germany were unable to travel through Austrian airspace in deploying to the Middle East.²⁶ In looking to the future, the DoD assumed that the so-called legacy posture would be unsuitable for undertaking operations into “near or distant theaters,” and that U.S. forces could no longer expect to fight in place as they had during the Cold War.²⁷ Perhaps most importantly, it was argued that forward-stationed forces, especially in Europe, offered no significant time advantage in terms of getting a military unit to the Persian Gulf, for example. This was despite the fact that sail time from Bremerhaven, Germany to Kuwait is actually shorter by about 7 calendar days than sailing from Beaumont, Texas to Kuwait.²⁸

Nonetheless, Secretary of Defense Rumsfeld went even further, arguing that restationing U.S. forces from overseas back to the United States would actually **increase** the ability of the United States to surge forces forward quickly to conflict zones. In his signature style, he first asked and then answered his own question: “[If we send] more troops home from theaters in Europe will it weaken our ability to surge quickly to trouble spots? Actually, the opposite is probably closer to the truth.”²⁹

Host Nation Politics

Some in Washington argued that U.S. allies had grown weary of hosting American military personnel.³⁰ This was especially true with regard to the U.S. Marine Corps presence in Okinawa, where local residents have complained for years about violence, noise, and other problems attributed to U.S. service members residing there.³¹ It also has increasingly applied to the American military presence at Yongsan in South Korea, where sprawling Seoul has gradually encroached right up to the garrison’s gates, as seen in Figure 4. The prime real estate of Yongsan Garrison in densely populated Seoul has long been eyed by South Korean developers, who were undoubtedly heartened when they heard then-Secretary of Defense Donald Rumsfeld ask, “If foreign troops were stationed in New York’s Central Park, would it be acceptable to Americans?”³² Hence, by reducing

overseas presence of U.S. military forces, Washington would reduce friction with allies and partner host nations.



Figure 4. Yongsan Garrison in Foreground, with Seoul High-rises in Background.³³

Family Readiness

This argument was based on the assumption that Soldiers and their families preferred to live in the United States instead of overseas in a country like Germany, especially if those overseas-stationed families had to endure so-called double separations.³⁴ That is, if forward-stationed Soldiers deployed from their forward locations to the Middle East, for example, their families back in Germany would be separated not simply from their deployed military family member but also their extended U.S.-based families. Moreover, it was assumed that even though Soldiers would deploy for overseas rotations, there would be fewer permanent changes of station and thus greater stability for families. Finally, it was argued that spouses of military service members were unable to work in the local economy due to host-nation restrictions.³⁵

Institutional Imperatives

Another argument in favor of restationing most Army forces back to the United States was that it facilitated easier force generation for combat operations. In order to have sufficient forces to handle the demands of wars in both Iraq and Afghanistan, the Army developed a force generation model—known as the Army Force Generation (ARFORGEN) model (see Figure 5)—that had active component units ready for deployment once every 3 years. This required rigorous adherence to an A-B-C rotation scheme that consumed readiness as quickly as it could be built: while Unit A was deployed in combat for a year, Unit B was conducting individual and collective training for a year to prepare for its

upcoming rotation following Unit A, and Unit C was resetting and recovering following its year in combat. At any given time, one-third of units were in a combat deployment, one-third were in training for a combat deployment, and one-third were returning and recovering from a combat deployment. Individuals within those units arrived, trained, deployed, and returned from deployment together. Units forward-stationed in Europe, however, were and still are comprised of individuals who had moved to Europe under PCS orders.

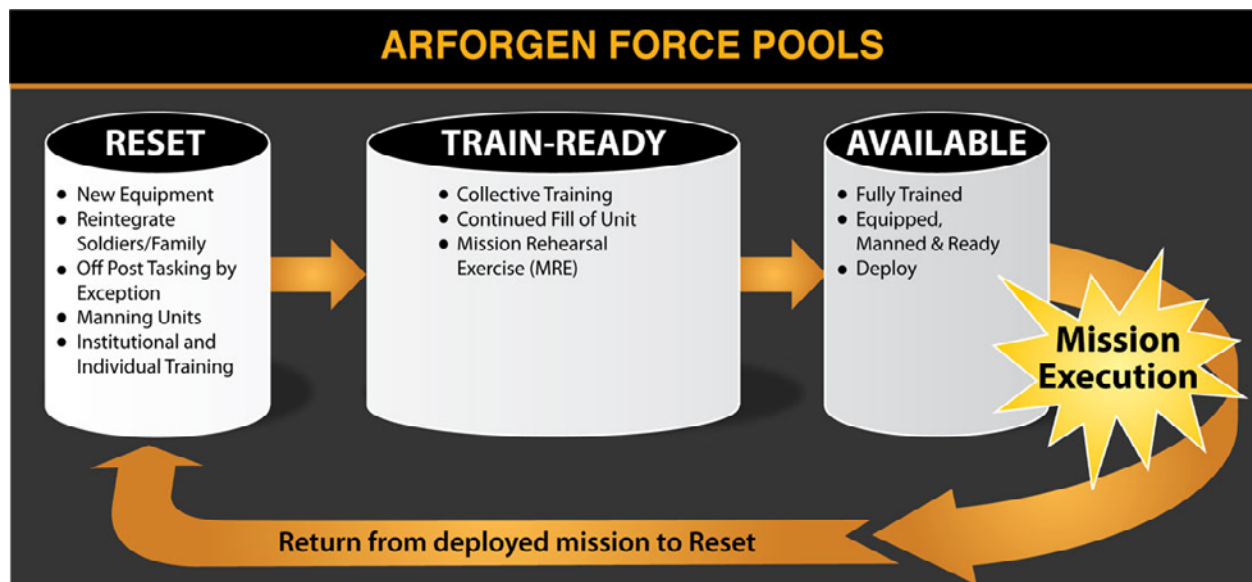


Figure 5. The ARFORGEN Cycle.³⁶

These PCS moves occurred roughly every 3 years and did not necessarily coincide with their respective unit's place in the ARFORGEN cycle. This complicated the ability of the Army to employ forward-stationed maneuver units in the same A-B-C rotation scheme as maneuver units stationed in the United States, because it affected the readiness of the gaining and losing units in both Europe and the United States.³⁷

This argument was not typically cited publicly, probably because it pertains to the seemingly esoteric world of force management. When it was mentioned publicly as a rationale for restationing from overseas back to the United States, the argument was typically couched in terms of permitting greater reach and enabling Washington to better manage the entire military force on a global basis.³⁸

Another institutional argument was the notion that significant drawdowns of forward presence in Europe were viewed by some within the Army staff and the Pentagon more broadly as a precondition for another round of base closures in the United States.³⁹ For some years, but especially in the wake of the post-Iraq War and post-sequestration drawdown in total Army force structure, the Army has been convinced that it has excess infrastructure in the United States. For this reason, the Army and the DoD have requested Congress authorize another round of base realignments and closures (BRAC).⁴⁰ However, members of Congress are loathe to authorize another BRAC round that would put at risk military infrastructure in their district or state. For this reason, arguments in favor of a

stateside BRAC would be stronger if it could be shown that overseas infrastructure – and with it, forward-stationed forces – had been cut as deeply as possible.

Unit Training Readiness

Most recently, other arguments that have been used to justify rotational deployments over forward stationing center on unit training readiness. Units that rotationally deploy with their equipment have to go through the process of packing up all of their equipment at home station, transporting it to the nearest port, shipping it overseas, and then conducting reception, staging, onward movement, and integration (RSOI) in theater (See Figure 6). Advocates of rotational deployment models argue that this effort amounts to training for precisely what a U.S.-stationed unit would need to do during a security crisis overseas. Nonetheless, without rotational deployments, so goes the argument, U.S.-stationed units would have fewer opportunities to conduct important expeditionary training activities.



Figure 6. U.S. Army Soldiers from the 662nd Movement Control Team, 25th Transportation Battalion, 501st Sustainment Brigade Observe the Arrival of M109A6 Paladin Self-Propelled Howitzers via Rail Car at Camp Casey, South Korea, March 27, 2007.⁴¹

Another training readiness argument centers on the notion that rotational deployments expose more of the force to the overseas operating environment. This is certainly the case today, given that most of the Army is stationed in the United States.

Finally, another unit training readiness argument in favor of rotational deployments centers on reducing personnel turnover relative to units that are forward-stationed. This

argument applies in particular to forward-stationed units in Korea, where most tours of duty last only 1 year. For a forward-stationed maneuver unit in Korea, this meant that during any given month, 8 percent of that unit's personnel were permanently changing station and moving to another assignment in the Army.

Other Arguments

The effort to develop studies or reports, testify before Congress, and otherwise explain the massive change about to occur in the Army's posture was designed to build public and Congressional support for restationing. There, however, are two reasons to think that restationing would have occurred even in the absence of the public effort. First, with no members of the House of Representatives or the Senate representing American facilities and units overseas, the U.S. Congress was predisposed toward cuts to forward presence and especially toward relocation of forward-stationed units back to the 50 States. Especially at a time when the Army was downsizing—following the 2011 Budget Control Act—most in Congress preferred that those cuts occur overseas, in the hope that this would permit more units to be maintained in the 50 States. The executive branch at that time was apparently unwilling or unable to engage in a political fight with members of Congress over cutting force structure within the 50 States, and the executive branch instead chose to continue cutting structure from overseas.⁴²

Perhaps more importantly though, it was clear to those intimately involved in the restationing effort that, especially in the first term of the Bush administration, the plan to withdraw forces from Europe in particular, but also from the Korean peninsula, had a momentum of its own, largely thanks to Secretary of Defense Donald Rumsfeld. In the words of one person with first-hand knowledge of the exchanges between Mr. Rumsfeld and senior U.S. military commanders in Europe, the Secretary's goal of withdrawing forces from Europe "was a done deal before the analysis even started."⁴³ The IGPBS was seen as "a lagging indicator, not a leading one."⁴⁴ Another observer noted that senior Office of the Secretary of Defense political appointees were quite clear regarding their intent to "get the Army out of Europe" as early as 2001, soon after the Bush administration entered office.⁴⁵

ASSESSING THE SHIFT TO ROTATIONAL PRESENCE

As a result of the implementation—with some modifications—of the 2003 IGPBS, the U.S. Army has increasingly become largely stationed in the 50 States. Correspondingly, the Army has increased its reliance on rotational presence to achieve deterrence and assurance effects, especially since 2014, in both Europe and on the Korean peninsula. This experience over the last couple of years has generated both quantitative and qualitative data that can help form the basis for judgements about the utility of rotational presence and inform future decisions on U.S. posture overseas in the next decade. Given the important role U.S. military overseas posture plays for not simply deterrence and assurance but an array of other national security objectives, it is both appropriate and necessary to consider whether the shift toward rotational presence has indeed paid off—literally and figuratively—as expected.

Fiscal Costs

In the case of Korea, there was no rigorous cost-benefit analysis conducted before the Army began rotating full brigade combat teams from the United States to the Korean peninsula in 2015.⁴⁶ In any case, and based on evidence to date, it appears that relying on rotational presence on the Korean peninsula is “always more expensive” than forward-stationed presence, given extant infrastructure, cost-sharing arrangements with the South Korean Government, and use of the Korea Enduring Equipment Set (KEES) by rotationally deployed units.⁴⁷ The commander of U.S. Forces Korea, General Vincent Brooks, said much the same in April 2016, when he argued that it was “absolutely” cheaper to have U.S. forces stationed in South Korea rather than bringing them home.⁴⁸

Instead, the U.S. Army in Korea was largely driven by the imperative to eliminate the turnover created by 1-year tours of duty. Prior to 2015, nearly all of the 20,000 U.S. Army troops on the Korean peninsula were assigned there for 1 year, most without accompanying dependents. One-year assignments meant frequent PCS moves for troops assigned to Korea, creating a turnover rate of roughly 8 percent per month.⁴⁹ Shifting to a rotational presence for a significant number—about 5,200 troops—of the 20,000 on the peninsula greatly reduces personnel churn and arguably strengthens unit readiness (more on this below). Nonetheless, no cost analysis preceded or accompanied this decision.⁵⁰

Unofficial cost analysis on the part of 2nd Infantry Division staff led to the expectation that overall fiscal costs for a rotationally deployed ABCT would be roughly the same as for a forward-stationed ABCT, with the exception of spare parts (Class IX, in logistician parlance).⁵¹ However, actual cost data to date would appear to support the views of General Brooks and others mentioned above. Operations tempo (OPTEMPO) costs for rotationally deployed ABCTs in Korea have averaged \$47.3 million over 9 months, higher than average OPTEMPO costs for the previously forward-stationed ABCT of \$38.1 million over 9 months.⁵² Ironically, average M1 tank miles—the number of miles driven by all tanks in a particular unit over a specific period of time—has been 16 percent **lower** for ABCTs rotationally deployed to Korea than for the previously forward-stationed ABCT.⁵³

Elsewhere in the Indo-Asia-Pacific, the U.S. Army has not maintained forward-stationed units in foreign countries beyond South Korea or Japan. In order to increase its forward presence and improve both expeditionary and decisive action readiness, USARPAC began implementing an initiative known as Pacific Pathways in 2014. This effort entails deploying a battalion-size task force on a series of back-to-back bilateral or multilateral exercises and other training events across the theater (see Figure 7).⁵⁴



Figure 7. U.S. and Malaysian Soldiers Conduct Patrols at Pacific Pathways Exercise.⁵⁵

Most importantly, Pacific Pathways has been viewed as a means of reducing the costs of forward presence and engagement. Instead of sending a military unit (or units) back and forth across the Pacific Ocean for various exercises, a single unit deploys and remains so for the duration of the sequentially arranged exercises. The former commander of USARPAC, General Vincent Brooks, argued that Pacific Pathways would be “an efficient way for us to use the limited resources that we’re going to have.”⁵⁶ More specifically, others argued that the Army was creating “efficiencies” by consolidating three or more previously discrete deployments into a single months-long operation.⁵⁷

Ironically though, one report found that Pathways events in 2015 cost a total of \$34.5 million, roughly \$18.1 million more than what the same exercises cost when conducted individually.⁵⁸ The reason for this though is clear enough—the 2015 (and subsequent) events involved participation of much larger force packages. Whether this initiative represents significant cost savings aside, Pathways rotations do not provide for continuous, heel-to-toe presence in the theater, since rotations last only about 90 days. As such, it has limited utility for strengthening assurance and deterrence, which are the two major concerns of this study. Nonetheless, the Pathways model could provide a useful, additive approach in conjunction with forward stationing.

Just as in Korea, there was no detailed cost-benefit analysis conducted in 2014 prior to the decision to begin conducting rotational deployments from the United States to Poland and the Baltic States.⁵⁹ Through most of 2014, the 173rd Airborne BCT, with headquarters in Italy, was tasked with providing presence in each of the Baltic States and Poland. By September 2014, that mission had shifted to the 1st Brigade, 1st Cavalry Division.

For the next 2 years—until January 2017—the presence mission in the Baltic States and Poland rotated between Europe-stationed units and U.S.-stationed units, with occasional underlaps.

Repeated efforts to develop cost estimates for those rotations were largely based on “educated guesswork,” given the lack of past data.⁶⁰ Even as heel-to-toe rotations of full BCTs began from the United States to Poland, the Baltic States, and elsewhere in Eastern Europe in early 2017, the cost estimates have not been as refined as they might have been (see Figure 8). The reason for this is that the cost model used by the Army—the Force and Organization Cost Estimating System (FORCES) suite of models—does not allow users to include unique costs that are not already listed in the model(s).⁶¹ This is critical given the novel nature of what the Army has been doing across all of Eastern Europe, where conditions and requirement may differ from country to country and even installation to installation.⁶²



Figure 8. A Live Fire Accuracy Screening Test undertaken by Bradley Fighting Vehicles of 3rd Armored Brigade Combat Team, 4th Infantry Division in Swietozow, Poland, January 16, 2017.⁶³

That said, the FORCES model, the Army Contingency Operations Model, and the growing amount of past data collected by USAREUR on rotational deployments from the United States to date can be used to develop a more robust set of cost estimates than has ever been possible before, in order to better inform future forward presence decisions in Europe or elsewhere. This study will now turn briefly to providing a cost estimate comparison that might be relied upon, for instance, in trying to determine whether it is more cost effective fiscally to rotationally deploy an ABCT from Ft. Hood to Europe, **or** to forward station an ABCT in Europe. An ABCT was chosen for illustrative and comparative

purposes largely because it is the centerpiece of the heel-to-toe rotations occurring currently in Europe. However, it is very important to note that an ABCT is only one element of effective and efficient deterrence and assurance in Europe or South Korea. Additionally, different types of Army units are likely to have different recurring costs.

Before attempting to compare costs associated with rotational presence versus forward stationing in Europe, some assumptions regarding recurring costs are in order:

- Each heel-to-toe rotation lasts 9 months. Annual averages are based on the assumption that within 3 years (36 months), 4 rotations can occur. Table 3 (Recurring Average Annual Fiscal Costs, in millions U.S. dollars [USD]) only includes annual recurring costs. One-time costs are considered later.
- Rotating units will conduct each rotation with their own equipment.
- Each rotating ABCT will incur predeployment costs to prepare personnel and equipment at home station lasting roughly 30 days and estimated to cost \$17.63 per rotation, or an average of \$23.5 million per year.⁶⁴ This includes obtaining special clothing, equipment, and other supplies; medical and dental services; theater-specific training; predeployment command, control, and communications; and miscellaneous deployment-related supplies and contracts.
- HQDA estimates that it costs \$38 million to move an ABCT from the United States to Germany each way, so Table 3 includes an average cost of \$101.33 million per year.⁶⁵
- Operations and Sustainment costs for a Ft. Hood-stationed ABCT and a Germany-stationed ABCT are based on the FORCES model.⁶⁶ The figures for Germany include overseas PCS costs.
- Above and beyond the base Operation and Sustainment costs just mentioned, there are OPTEMPO costs associated with the exercises and other activities an ABCT conducts in Eastern Europe. Given costs of \$372.1 million per rotation for an ABCT from Ft. Hood,⁶⁷ Table 3 includes an average annual cost of \$496.1 million, assuming four rotations every 3 years. This includes the costs associated with a 30-day overlap between deploying and redeploying ABCTs as well as family separation pay. The \$372.1 million per rotation figure comprises the following:⁶⁸
 - o Family Separation Pay: \$9.5 million;
 - o Subsistence: \$44 million;
 - o Clothing and other personnel equipment/supplies: \$15.6 million;
 - o Medical support and health services: \$9.1 million;
 - o Training: \$2.2 million;
 - o OPTEMPO (fuel, other petroleum products, parts): \$81.4 million;
 - o Facilities/Base Support: \$1.7 million;
 - o Command, control, communications, computers, and intelligence (C4I): \$20.6 million;
 - o Other supplies and miscellaneous contracts: \$140.9 million; and
 - o Second destination transportation costs: \$47.1 million.
- Operations and sustainment costs for a forward-stationed unit—to conduct over the course of a year roughly 75 percent of the exercises and other training events that rotationally deployed ABCTs conduct in a year—is estimated to be \$327.7 million.⁶⁹

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- o This figure excludes family separation pay, which rotationally deployed units receive, but forward-stationed units do not, of roughly \$7.9 million per rotation. This assumes only 75 percent of a 4,200-person U.S.-stationed ABCT is rotationally deployed, that all deployed personnel have stateside dependents they are separated from, and that all deployed personnel are separated for 10 months.
 - o As noted above, the additional OPTEMPO costs associated with a rotationally deployed unit are \$372.1 million per rotation. When the family separation costs are excluded, the cost incurred by a rotational unit over 10 months is \$362.6 million, or \$36.3 million per month.
 - o If a forward-stationed ABCT incurs 75 percent of the additional OPTEMPO costs that a rotationally deployed ABCT would, this yields a cost of \$27.2 million per month, or \$327.7 million per year.
 - As implied in the previous sub-bullet, this study assumes if the United States forward stations an ABCT in Europe west of Poland (for example, in Germany), Washington will not maintain heel-to-toe ABCT presence **across Eastern Europe** as it has since January 2017. This assumption is based on three factors:
 - o First, regardless of ABCT disposition, the United States already has a heel-to-toe presence in Poland through its role in the NATO eFP initiative. Under eFP, the United States has been rotationally deploying a battalion-sized unit from its forward-stationed forces in Europe into Poland on a heel-to-toe basis.
 - o Second, the Patriots-to-Poland deployments of several years ago provides a useful, illustrative example of how Washington has previously employed satisficing solutions in the context of forward presence. As part of a bilateral defense cooperation agreement signed in 2008 by the United States and Poland, Washington began rotationally deploying Patriot units to Poland in 2010. For reasons largely related to operational demands elsewhere, as well as fiscal cost, U.S. Patriot rotations to Poland did not comprise an entire battery, did not always carry missiles, and were not integrated into Polish air defense. Of course Warsaw was dissatisfied with this – Poland preferred fully manned, fully equipped, integrated units for each rotation – yet Washington was satisfied it had met the requirement of increased familiarization and training with Poles on air and missile defense.⁷⁰
 - o Finally, spreading a rotationally deployed ABCT across Poland and six other Eastern European countries – which is what the United States is currently doing – prevents it from achieving mass and diminishes its combat power. Stationing it in a single location allows it to maintain mass for faster movement to contingencies.
 - o Alternatively, if Washington decided to maintain heel-to-toe ABCT presence across Eastern Europe, while **also** forward stationing an ABCT in Germany, it is very likely the United States would occasionally need to rotationally deploy forces from the United States. The recurring costs associated with **both** a forward-stationed unit and occasionally rotational deployments
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would obviously be greater than simply maintaining the current rotational deployments from the 50 States directly into Eastern Europe.

- Beginning in mid-2017, the Army began implementing Army Incentive Pay for Operational Deployment (AIP-OD) for rotational deployments to Europe, which will provide \$195 per troop per month. AIP-OD is already paid to troops rotationally deployed to Korea, and the Army is implementing AIP-OD in Europe to bring greater pay parity to rotational deployments that are not tied to contingency operations. Assuming only 75 percent of a 4,200-person U.S.-stationed ABCT is rotationally deployed, this will yield a cost of \$6.1 million per rotation, or \$8.2 million per year on average.
- Adding an ABCT to Germany will raise the school-age population there and could incur average annual costs of \$29.3 million.⁷¹ Meanwhile, to support the education of dependents associated with an ABCT stationed in Ft. Hood, the U.S. Department of Education provides an average of \$450 per service member to local school districts in Impact Aid, according to a RAND study.⁷² For districts in which more than 20 percent of the students come from military families, the DoD also provides Supplemental Impact Aid.⁷³ In the case of Ft. Hood, local school districts like the Killeen Independent School District and the Copperas Cove Independent School District both receive DoEd Impact Aid and DoD Supplemental Impact Aid. One recent study estimated that the relocation of a BCT from Ft. Hood could cost the districts there between \$8.5 and \$20 million.⁷⁴ For the purposes of this study, an average of \$14.25 million in total impact aid funding is assumed.
- One-time military construction at forward operating sites in Poland and elsewhere in Eastern Europe is not included in Table 3, since it is assumed that such costs are likely to be incurred **regardless** of whether a rotating unit or a forward-stationed unit uses the site(s).
- Mission Command Element costs – that is, the costs associated with maintaining a division-level command element of some sort between the brigade rotated to or forward-stationed in Europe and the theater-level Army headquarters (USAREUR) – are not included, since it is assumed that such a mission command element is necessary **regardless** of whether a brigade is forward-stationed or rotated from the United States.
- Additional Sustainment Enabler costs – that is, the costs of providing sustainment to a unit above and beyond what USAREUR is capable of today – are not included, since it is assumed that additional sustainment enabler units and capabilities will be required **regardless** of whether a unit is rotated from the United States or relocated to Germany.⁷⁵
- Additional Civilian Pay costs – that is, costs included in European Reassurance Initiative (ERI) budget estimates and related to the increased burden of managing a rotational force presence – are not included, since it is assumed that additional civilian capacity will be required **regardless** of whether a brigade is rotated to Europe or relocated there.⁷⁶

	Rotationally Deployed (from Ft. Hood) ABCT Annual Recurring Average Costs	Forward-Stationed (Germany) ABCT Annual Recurring Average Costs
Predeployment requirements	23.51	0.00
To/from theater transportation for rotating personnel and equipment	101.33	0.00
Operations and sustainment, for a unit based at Ft. Hood	548.40	0.00
Operations and sustainment, for a unit stationed in Germany	0.00	699.60
Additional operations and sustainment for activities in Europe (includes Family Separation Pay and a 30-day overlap for Rotational)	496.10	327.70
AIP-OD	8.20	0.00
Impact aid (Rotational) / DoD education activity (Forward-Stationed)	14.25	29.30
SUM	\$1,191.80	\$1,056.60

Table 3. Recurring Average Annual Fiscal Costs (in millions USD).

As shown above, the difference in terms of recurring average annual fiscal costs is roughly \$135 million. This is a fairly significant difference, but the actual difference in recurring annual fiscal costs is probably somewhat greater for two reasons. First, theater specific requirements in Europe appear to be greater than originally anticipated before heel-to-toe rotational deployments there began in early 2017. For example, every rotational unit must have its fuel and ammunition carrying equipment certified to operate in Europe, resulting in costs for parts, labor, and testing that is currently estimated at \$8.5 million per year.⁷⁷ Forward-stationed units go through this process also, but not as frequently since their equipment does not rotate in and out of theater every 9 months. Additionally, upon return to the United States, rotationally deployed equipment must complete agricultural cleaning, currently estimated at \$5 million per rotation, or \$6.6 million per year.⁷⁸ As with the certification requirement, forward-stationed units incur some of these same costs, but at a far lower rate than a rotationally deployed unit. These costs are not included in the estimates cited above for transportation to and from the theater.

Second, force structure costs are not included above. Relying on a rotational deployment model for overseas presence requires a larger end strength, or at least a greater number of combat units, than does an overseas presence model based on forward stationing. If the United States wants to maintain a continuous brigade presence in Poland, for instance, it could forward station a brigade there. In this hypothetical example, that brigade would train in Poland, its personnel and their families would all live in Poland, and

when necessary for operations elsewhere the brigade would deploy from and redeploy to Poland. This requires the Army to maintain a single brigade to achieve that continuous brigade presence.

However, if it chooses rotational presence at some location—and assuming the Army wants to maintain a 1:2 ratio of deployment time to home station time—the Army requires one additional brigade over what it already has in the inventory in order to maintain an A-B-C rotation scheme.⁷⁹ According to the Congressional Budget Office, an ABCT costs \$500 million per year to operate, including compensation for its military personnel.⁸⁰ This would bring the total recurring average annual fiscal costs of rotational presence in Europe to **\$1.691 billion**.

In addition to the recurring average annual fiscal costs, there are one-time fiscal costs as well, which are featured in Table 4. As noted previously, to physically relocate an ABCT from the United States to Europe would cost the Army roughly \$128.5 million.⁸¹

Relocating an ABCT to Europe would also require additional one-time military construction costs. Since the United States has reduced so much of its force structure in Europe, it has greatly consolidated its infrastructure footprint as well, returning many facilities back to host nation authorities. As a result, no single location in the current U.S. military footprint in Europe has enough capacity to host an entire ABCT without building some amount of additional infrastructure. Hence, military construction will be necessary.

In one scenario, in which those elements of the 173rd airborne brigade stationed at Grafenwoehr relocated to Vicenza, Italy, the one-time relocation of the 173rd's Grafenwoehr-stationed elements plus the one-time military construction costs would add up to roughly \$1.6 billion.⁸² A more conservative scenario would involve moving Germany-stationed elements of the 173rd as previously suggested as well as moving the 2nd Stryker Cavalry Regiment from Vilseck to Baumholder—this option would require roughly \$50.1 million in military construction and \$5.6 million in relocation costs, for a total of \$55.7 million in one-time costs.⁸³

Of course locating an ABCT at Grafenwoehr is not the only option. It could be stationed, for instance, in Baumholder, which has an adjacent training area and which is close to Ramstein Air Base. This option would incur one-time military construction costs of approximately \$166.5 million.⁸⁴ The ABCT could also be stationed in Northern Germany, in facilities previously used by the British Army of the Rhine. For instance, the Bergen-Hohne garrison—consisting of several barracks facilities as well as a tank live fire range—was, until 2015, home to between 4,000 and 5,000 British troops that were part of the 7th Armoured Brigade (UK). New construction and upgrades to facilities there could cost as much as \$1.5 billion.⁸⁵

Another option would be to base the ABCT in Poland. According to those familiar with extant military sites in western Poland, it is likely that a significant amount of military construction would be necessary to provide enough quality housing, barracks, family support, and other infrastructure for a full ABCT. The total for this might amount to somewhere between \$1-1.2 billion.⁸⁶ Nonetheless, forward stationing an ABCT in Poland might be preferable over Germany for several reasons.

First, construction costs are cheaper in Poland. The DoD regularly publishes a list of area cost factors for use as a guide for the preparation and review of programming and budget cost estimates for military construction and family housing. These market-based

cost factors help budget planners to account for local or regional construction cost differentials. For example, it is more expensive to build in California, where the cost factor is 1.24, than it is to build in Louisiana, where the cost factor is 0.87. In Europe, the cost factor in Grafenwoehr, Germany is 1.17, while the cost factor in Poland is 0.95.⁸⁷

Second, given Poland's strong desire for larger scale permanent U.S. military presence,⁸⁸ it seems clear the Polish Government may be interested in direct cost sharing, especially given the cost-sharing arrangements reached to date on forward operating sites in Poland.⁸⁹ A robust, direct cost-sharing agreement, similar to the kind of agreement the United States has with South Korea, could theoretically cut one-time military construction costs in half. Poland's defense budget for 2017 is roughly \$9.6 billion, and it currently spends just over 5 percent – or about \$496 million – per year on infrastructure.⁹⁰ To date, the Polish have shown themselves willing to cost-share in the development of joint use forward operating sites that will be used by rotationally deployed U.S. forces. Assuming joint use of some facilities, as appropriate, it seems clear Poland would be willing to cost-share for the development of infrastructure for forward-stationed U.S. forces.

Finally, stationing an ABCT in Poland positions it closer to the likely threat, making it more able to quickly respond to any catastrophic security event in the Baltics, while still keeping it as deployable by sea, rail, and air for worldwide contingencies as would be the case from Germany. Similarly, stationing an ABCT in Poland keeps it closer to the countries – especially the Baltic States and of course Poland – with which it would likely spend most of its time training (see Figure 9). Stationing the ABCT in Poland would clearly require careful diplomacy both among American allies in Western Europe, some of which might consider the move a violation of the 1997 NATO-Russia Founding Act, and vis-à-vis Moscow, which would certainly characterize the move as offensive and destabilizing.



Figure 9. Map of Kaliningrad and Baltic Sea Region.⁹¹

With regard to the concerns of allies, it is important to remember that the Founding Act is a political agreement, not a legally binding treaty. Political agreements are subject to evolving interpretation. Moreover, given Russia’s invasion of Ukraine and annexation of Crimea, it is difficult to argue that Russia has held up its part of the Founding Act to “exercise similar restraint in its conventional force deployments in Europe.”⁹² Regarding Moscow’s concerns, it is similarly difficult to argue that a 4,200-strong ABCT is destabilizing in the face of the arsenal Russia has already built in Kaliningrad, including S-400 air defense systems, Iskander-M short-range nuclear-capable ballistic and cruise missiles, Buyan-class corvettes armed with nuclear-capable Kalibr cruise missiles, the Bal land-based anti-ship missile system, the Bastion mobile anti-ship defense system, Sukhoi Su-30SM “Flanker” combat aircraft, and tens of thousands of troops.⁹³

	Rotationally Deployed (from Ft. Hood) ABCT	Forward-stationed (Grafenwoehr #1) ABCT	Forward-stationed (Grafenwoehr #2) ABCT	Forward-stationed (Baumholder) ABCT	Forward-stationed (Northern GE) ABCT	Forward-stationed (Poland) ABCT
Relocation of ABCT to Europe	0	128.5	128.5	128.5	128.5	128.5
Relocation of 173rd units; military construction (MILCON) in Grafenwoehr	0	1,600	0	0	0	0
Relocation of 173rd and 2nd Stryker Cavalry Regiment units; MILCON in Grafenwoehr	0	0	55.7	0	0	0
MILCON in Baumholder	0	0	0	166.5	0	0
MILCON in NE Germany	0	0	0	0	1,500	0
MILCON in Poland, with cost-sharing	0	0	0	0	0	550
SUM	\$0.0	\$1,728.5	\$184.2	\$295.0	\$1,628.5	\$678.5

Table 4. One-Time Fiscal Costs (in millions USD).

The one-time cost difference between rotational presence and forward stationing is fairly significant, regardless of the option chosen for forward stationing. However, there is one significant mitigating factor. It was argued previously that any cost estimation includes the recurring cost of additional force structure to achieve an A-B-C rotation

scheme. In addition to the annual costs of maintaining an additional ABCT in the inventory, it therefore also makes sense to include the one-time costs associated with equipping that ABCT, which could be as high as \$2.8 billion.⁹⁴ Hence, the difference in one-time costs among the various options above ought to be considered less than what is shown.

If the recurring and one-time additional force structure costs are excluded, the breakeven point—that is, the number of years before the recurring savings from forward stationing featured on Table 3 would pay-off the one-time costs of relocation and/or military construction featured on Table 4—ranges from about 1.5 to as many as 13 years, as shown in Table 5.

	Station ABCT in Grafenwoehr; Relocate 173rd units	Station ABCT in Grafenwoehr; Relocate 173rd and 2nd Stryker Cavalry Regiment units	Station ABCT in Baumholder	Station ABCT in Northern Germany	Station ABCT in Poland (with cost-sharing)
Pay-off Period (in years)	12.8	1.4	2.2	12.8	5.3

Table 5. Breakeven Point for Forward Stationing (in years).

Unit Training Readiness

Fiscal costs should not and cannot be the sole basis upon which choices between rotational deployments and forward stationing—or something in between—are made. Unit training readiness—and questions of whether and how forward presence builds, maintains, or consumes it—is a critical factor to consider as well.

In the case of Korea, it seems clear based on numerous research discussions with the commanders of units that have conducted rotations there as well as leaders and staff of 8th Army and 2nd Infantry Division in South Korea that rotational deployments provide for increased unit readiness in a decisive action training context, more so than forward-stationed units. As discussed above, immediately before a rotational deployment to South Korea, the designated brigade combat team completes a collective training rotation at the National Training Center (NTC) at Ft. Irwin, California. The deploying units are, therefore, typically at the peak of training readiness.

Moreover, because these units maintain a high OPTEMPO during their rotational deployments—that is, they are nearly constantly engaged in training and exercises for 9 months—unit readiness is typically maintained **throughout** the deployment.⁹⁵ This is especially appealing to some senior U.S. commanders on the ground in both Korea, as

noted above, as well as in Europe, who contend that the higher level of activity in theater bolsters assurance and deterrence.⁹⁶

However, the readiness benefits associated with rotationally deployed forces are partially offset by the level of unit manning, which for rotationally deployed units can be as low as 67 percent. Ultimately, this yields somewhat reduced combat power for rotational deployments. During each rotation, brigade commanders must leave behind at home station in the United States a small rear detachment to handle maintenance of left-behind equipment and other administrative or technical tasks. In contrast, forward-stationed units such as 2SCR and the 173rd are typically manned at 95 percent, in accordance with Army guidance.⁹⁷

Even though forward-stationed units in Korea were near fully manned, U.S. commanders in South Korea had to manage two unique challenges. First, under the forward stationing model, a large proportion of Soldiers sent to Korea were relatively junior. Second, forward-stationed units in Korea regularly suffered from an average of 8 percent turnover in personnel every month, given that most military assignments there lasted no longer than 1 year, without accompanying dependents.⁹⁸ As troops moved at the completion of their 1-year tours, this created personnel churn that reduced unit readiness by breaking up crews and small teams.

At present, rotational presence both provides more seasoned personnel and appears to alleviate personnel turnover, helping to maintain higher levels of readiness throughout the deployment. However, in the absence of a declared emergency, neither DoD policy nor U.S. law permit the Army to halt all personnel-related moves. This means that rotationally deployed units remain subject to normal personnel turbulence just as are forward-stationed units.⁹⁹ Over time, this could undercut one of the primary arguments in favor of rotational deployments to South Korea—namely, that such rotations end personnel churn.

In order to prepare for the specific context of working in South Korea for 9 months, units about to deploy there undergo a period of learning local customs, regulations, and norms. The unit's integration in South Korea is further facilitated somewhat by overlap in rotations—for instance, units that are rotating into South Korea typically have a period of overlap with the outgoing unit lasting 10 working days.¹⁰⁰

Nonetheless, upon their arrival in South Korea, rotationally deployed units do not necessarily know as much about the culture, the terrain, the political context, and the idiosyncrasies of counterpart South Korean units and personnel. A learning curve inevitably ensues, which is quickly complicated after the transfer of authority from the redeploying unit—there simply are not as many experienced hands around to answer key questions or point out pitfalls. Even though forward-stationed units saw 8 percent monthly personnel turnover, institutional memory was stronger.¹⁰¹

The same situation applies in Europe where rotationally deployed units arrive with only limited cultural, institutional, and political insight, relative to their forward-stationed counterparts. Arguably, the contrast between rotationally deployed troops in Europe and those forward-stationed on the continent is even more substantial than that between rotationally deployed troops in Korea and those forward-stationed on the Korean peninsula, given the difference in overseas tour length between Korea and Europe. Forward-stationed forces in Korea are typically on 1-year tours. Meanwhile, in the case of Europe,

forward-stationed troops typically are there for 3 years, enabling them to have a significantly longer period of exposure to foreign culture, counterpart units, allied procedures, and so forth, relative to the rotationally deployed troops who are on the ground for 9 to 10 months. Indeed, by the time that rotationally deployed troops in Europe begin to overcome the learning curve, it is time to redeploy home.

In both theaters, this problem is potentially more significant for units that require greater in-depth knowledge of local customs, rules, regulations, terrain, and counterparts. For instance, the kinds of training, exercises, and other deterrence and assurance-related activities conducted by a combat aviation brigade or an air defense artillery unit arguably require a more detailed knowledge of local, regional, and national rules, regulations, airspace, terrain, and counterpart units than those necessary for standard ground maneuver brigade combat teams.¹⁰² Certainly **all** types of Army units can gain benefit from greater in-depth knowledge of their training or operating environment, but this appears acutely so for specific kinds of units.

On the other hand, for units that rotationally deploy to Europe with their own equipment, there are benefits to be gained from going through the process of packing all of that equipment up at home station, transporting it to a port in the United States, shipping it across the ocean, receiving it at a port in Germany or Poland, and then conducting onward movement to a forward operating location (see Figure 10).¹⁰³ This is precisely the kind of training stateside units need to prepare them for a crisis.¹⁰⁴



Figure 10. Soldiers from the 4th Infantry Division in Fort Carson, Colorado, Offload an M2 Bradley Fighting Vehicle from the Green Ridge Ship during the Reception, Staging, and Onward Movement Phase of Exercise Saber Strike.¹⁰⁵

The Pacific Pathways initiative mentioned above offers this same kind of deployment skills training and is cited as a major benefit in terms of building readiness. In particular, Pathways training rotations stress enablers in a way that was never possible under the previous exercise model used by USARPAC.¹⁰⁶ For instance, the Defense Logistics Agency goes through all the motions of an actual operation, shipping equipment and supplies that they did not previously do under legacy exercise programs and mimicking how the DoD would conduct operations in the event of a crisis or a disaster response. Similarly, officials in the 25th Combat Aviation Brigade reported that the speed, efficiency, and safety of their port operations improved because of Pathways.¹⁰⁷

With regard to heel-to-toe presence in Korea, though, similar readiness benefits do not accrue to units that rotationally deploy there, since they fall in on the pre-positioned KEES and do not bring their own equipment across the Pacific for their 9-month deployment on the Peninsula.¹⁰⁸ In Europe, forward-stationed units achieve similar RSOI training experience when they perform nearly the same tasks as a unit rotationally deploying from the United States in preparation for an exercise away from their home station. For instance, Germany-stationed units must pack up their equipment and transport it to exercise locations in Poland and elsewhere in Eastern Europe.

An important element of readiness—which the Army is gradually coming to appreciate—is the degree to which U.S. and allied troops and units are interoperable. Over the last 15 to 20 years, it has become commonplace for U.S. national security, defense, and military strategies to state that the United States prefers to fight in coalitions whenever possible, and in practice this is precisely what the United States has done (see Figure 11). For these reasons, interoperability is a vital component of overall readiness. As noted in the previous section, some argue that by using a rotational deployment model, it is possible to expose more U.S. forces to operating in Europe and South Korea.¹⁰⁹ However, the problem of insufficient exposure of U.S. forces to operating with allies in Europe and South Korea would likely not exist if the Army had more of its force structure forward-stationed.



Figure 11. U.S. and Lithuanian Troops Work Together During an Exercise in October 2014.¹¹⁰

A generation or two ago, it was commonplace for Army troops to have at least one overseas tour in Europe or South Korea early in their military careers. Today, this has become increasingly rare, creating a problem the Army must solve through other means, including rotational deployments. However, exposure does not necessarily build or maintain interoperability necessary for high intensity operations, nuanced gray zone conflict, or plug-and-play unit integration. More specifically, there is more to allied interoperability than simply knowing how to “speak NATO,” although familiarity with NATO terms, procedures, norms, and operations is obviously critical for a successful deployment to Europe. Anecdotal evidence—including the experience of seasoned Army leaders—indicates that there are practical, positive implications associated with forward stationing and the regular interaction it affords with the units, military personnel, and civilians of U.S. allies.¹¹¹ For instance, there is evidence to suggest that forward-stationed personnel operate more effectively on Europe road networks, because they live **and** work there.¹¹² Aside from the anecdotal, what little scholarly research that exists on this subject indicates that the development and sustainment of personal and unit relationships through permanent forward stationing enables smoother integration during complex combat operations against hybrid threats.¹¹³

Despite the high readiness levels that rotational forces arrive overseas with and the high OPTEMPO they maintain while deployed overseas, some senior U.S. military commanders stationed in Korea and Europe appear to more often prefer forward-stationed forces over rotational forces.¹¹⁴ In the words of one, “All things considered, permanent forward presence is always preferable to rotational.”¹¹⁵ Another argues, “forward-stationed forces are . . . best,” and that a heel-to-toe rotational presence is “the next best thing.”¹¹⁶ The former top American officer in Europe, General Phil Breedlove, was even more explicit, arguing, “There is simply no substitute for our forward force presence in Europe.”¹¹⁷ On another occasion, he characterized rotational presence as a “second best,” relative to forward stationing.¹¹⁸

Political-Military Considerations

For the most part, forward-stationed forces bring greater political-military benefits (see Figure 12) than rotationally deployed forces for at least four reasons. First, more frequent turnover of personnel and units, as exists under a rotational deployment model, yields less familiarity with host nation civilian and military officials as well as local customs and regulations.¹¹⁹ Military diplomacy vis-à-vis the host nation therefore becomes more difficult and time consuming. Of course just like forward-stationed units, rotationally deployed units interact with host nation political officials and military counterparts, but as American officials experienced in combat during the wars in Iraq and Afghanistan, a familiar lifecycle emerges during a rotational deployment.¹²⁰ Just as the hard won relationships with host nation officials are solidifying, the rotation ends, and the brigade commander and his entire leadership team are sent stateside.¹²¹



Figure 12. Frau Dr. Ursula von der Leyen, Germany's Minister of Defense, meets with Lieutenant General Ben Hodges, Commander of USAREUR, at Clay Kaserne in Wiesbaden, August 10, 2016.¹²²

Indeed some argue explicitly that short-term rotations allow military personnel just enough time to learn the politics of the region they are operating in, but not enough time to influence it.¹²³ Limiting the time of leaders—who are attempting to develop relationships and knowledge necessary to function at not simply the tactical level but also the operational and perhaps the strategic—is especially unhelpful to broader U.S. political-military efforts. It ultimately ensures military leaders never have more than a superficial understanding of the situation on the ground.

Second, forward-stationed troops bring an asset to bear that rotationally deployed forces cannot under almost any circumstances—their dependents. Families that travel with their service members overseas essentially become unofficial American ambassadors.¹²⁴ With 60 percent of forward-stationed Soldiers in Europe living off-post, dependents become engaged locally, forging bonds with host nation personnel that contribute to the strengthening of strategic interoperability between the United States and allied countries.¹²⁵

Third, host nation officials associate a more enduring commitment with forward-stationed forces.¹²⁶ For instance, a senior political appointee in the Polish defense ministry explained that forward-stationed presence was preferable because of the U.S. commitment it represented.¹²⁷ Alternatively, the shift toward rotational presence on the Korean peninsula—along with other steps such as moving the U.S. military footprint south of Seoul—has caused unease within some parts of the South Korean Government over the American commitment.¹²⁸

Host nations are also aware of the manner in which the United States funds its rotational deployments. At present, rotational deployments to Europe are funded through overseas contingency operations budgets, not the Army's base budget.¹²⁹ This tends to characterize rotational deployments as temporary contingencies, or operations that could be shut off relatively quickly and easily. Forward-stationed units are funded in base budgets, signaling to friends and adversaries alike a stronger degree of constancy in the American commitment to allied defense.

Fourth, forward-stationed forces and their families bring material benefits to the host nation that promote economic growth and help to mitigate any negative externalities of a nearby U.S. military presence. Off-post purchases and the infusion of American dollars into local communities generate goodwill through increased host nation commerce and jobs. At the same time, those material benefits help to balance out the downsides of hosting U.S. military units at the local level, such as increased noise.¹³⁰

Soldier and Family Readiness

As the Army has long known—thanks in part to its forward presence in the former West Germany during the Cold War—it can be stressful for families and other dependents to live so close to the border of an adversary state poised to unleash significant destructive military power with little warning. That same stress **continues** to exist to this day—as it has for decades—on the Korean Peninsula, where even the youngest dependents of U.S. service members are issued gas masks and participate in noncombatant evacuation exercises twice per year.

Nevertheless, there is strong anecdotal evidence to suggest that the shift from forward stationing to an Army that fulfills deterrence and reassurance missions through 9-month rotational deployments is having a detrimental effect on morale and family readiness. When Soldiers deploy to combat, as many in the Army did multiple times during the wars in Iraq and Afghanistan, they typically justify the time away from family for reasons both moral—their country needs them in a time of war—and material—they receive combat pay, tax benefits, prestige, and other incentives. In the case of deterrence/reassurance rotational deployments to Europe and Korea, neither the moral nor many of the material justifications apply in the same way.

In a recent sensing session with officers and mid-level noncommissioned officers of a unit that was about to begin a rotational deployment overseas, it was clear that many in that unit did not feel that the sacrifice that they were about to endure—particularly in terms of time away from family—was worthwhile.¹³¹ These service members were particularly concerned with how the Army was failing to justify to the force the necessity of regular, 9-month deployments away from home, especially given the absence of the moral and material incentives mentioned above.

It is possible that peacetime rotational deployments to Europe and Korea inoculate family members against the shock of having their service member deployed during a national security crisis, that the ubiquity of the internet makes months' long absences tolerable, and that many Soldiers enjoy the chance to temporarily leave the confines of their stateside military facility and see some of the world on a rotational deployment.¹³² However, these potentially positive aspects of rotational deployments do not appear to be

outweighing the downsides. For example, one commander spoke of his unit “consuming family readiness” through rotational deployments, citing anecdotal evidence of spouse complaints regarding service member deployments, and difficulty in fulfilling reenlistment goals.¹³³ Others have cited anecdotal evidence of lower morale, higher incidence of discipline issues, increased divorce rates, junior officers in particular deciding not to remain in uniform, and families and Soldiers dissatisfied with the pressures of routine peacetime rotational deployments.¹³⁴

Within the Army’s Deputy Chief of Staff, G1 – the personnel directorate of the Army – senior reenlistment counselors are beginning to acknowledge that overseas rotations to Korea and Europe may have a negative impact on first-term reenlistments in particular.¹³⁵ In the view of the reenlistment counselors, it may be difficult for the Army to convince young Soldiers to endure many of the hardships associated with a deployment to combat – for example, at least 10 months separation from family, when the NTC/ Joint Readiness Training Center (JRTC) rotation is included, and a very high OPTEMPO while deployed – without many of the same benefits such as combat pay or the prestige of earning a combat patch.

Perhaps most worrisomely, this anecdotal evidence appears increasingly supported by available monthly reenlistment data. Using reenlistment data obtained from the Army Deputy Chief of Staff, G1, it is possible to examine monthly reenlistment rates for the 12 months following a unit’s rotational deployment. According to G1 staff, it is important to look at a full 12-month period following a rotation, since the first quarter of any FY tends to have higher enlistment rates while the fourth quarter of any FY tends to have the lowest enlistment rates.¹³⁶ Examining a 12-month period following a rotational deployment eliminates seasonality.

For the 12 month period following the respective completion of 4 separate unit rotations – 1/1 Cavalry Division to Europe in late 2014; 2/1 Cavalry Division to Korea from July 2015 to February 2016; 1/3 Infantry Division to Europe in mid-2015; and 1/3 Infantry Division to Europe in late 2015 – monthly reenlistment rates were lower in 3 out of 4 instances compared to the monthly reenlistment rates for all Army BCTs, as seen in Table 6.¹³⁷ The evidence of potentially reduced morale and reenlistments for rotationally deployed units is even starker when compared to forward-stationed units such as the 2nd Stryker Cavalry Regiment, as seen in Table 7.¹³⁸

	Unit Reenlistment Rate (for 12 months after deployment)	All Army BCTs Reenlistment Rate (for same 12 months)	Difference in Percentage Terms
Rotational Unit A	9.52%	9.21%	+3.4%
Rotational Unit B	8.85%	9.20%	-3.9%
Rotational Unit C	8.20%	9.34%	-12.2%
Rotational Unit D	8.31%	9.24%	-10.1%

Table 6. Comparative Reenlistment Rates for Rotational Units and All Army BCTs.

	Rotational Unit Reenlistment Rate (for 12 months after deployment)	2nd Stryker Cavalry Regiment Reenlistment Rate (for same 12 months)	Difference in Percentage Terms
Rotational Unit A	9.52%	10.84%	-12.23%
Rotational Unit B	8.85%	13.52%	-34.57%
Rotational Unit C	8.20%	13.02%	-37.04%
Rotational Unit D	8.31%	12.68%	-34.47%

Table 7. Comparative Reenlistment Rates for Rotational Units and a Forward-Stationed Unit.

It is important to note that this evidence does not necessarily point to a causal linkage between rotational deployments and lower monthly reenlistment rates. At a minimum though, it is certainly plausible to argue that there is an emerging correlation between rotational deployments and lower reenlistment rates.¹³⁹

The Army is trying to address the pay differences between rotational deployments to Korea and to Europe through, for example, the AIP-OD initiative mentioned previously. This should bring greater parity to the pay received by troops deploying to Europe, although those deploying to Korea will likely still receive slightly more. Additionally, troops on rotational deployment to either location will still not receive imminent danger pay, the sum of what troops get for contingency operations, or tax-free pay.

WHAT MIGHT THE ARMY LEARN FROM THE EXPERIENCES OF OTHERS?

The United States is not the only Western military or even the only U.S. service branch currently trying to manage the costs associated with rotational forward presence on land. During its Warsaw Summit in 2016, the NATO alliance announced it would begin sending four battlegroups on a rotational basis to the Baltic States and Poland. These four battlegroups are each led by a framework ally—the United Kingdom will lead the battlegroup in Estonia, Canada in Latvia, Germany in Lithuania, and the United States in Poland. As the allies begin to implement this eFP, there are opportunities for the United States to learn how other countries are handling the challenges—fiscal and otherwise—of continuous rotational forward presence.

Meanwhile, for several years the U.S. Marine Corps has conducted rotational deployments to Darwin, Australia. Beginning with just a few hundred Marines, the short deployments there have gradually increased, as have the array of lessons learned as the Marine Corps fulfills a key part of the rebalance to the Asia-Pacific.

NATO's Enhanced Forward Presence (eFP)

In spring 2017, allied battle groups—essentially battalion task forces numbering around 1,000 troops each—began rotational deployments to Estonia, Latvia, Lithuania, and Poland (see Figure 13). Framework nations for each battlegroup include the United Kingdom in Estonia, Canada in Latvia, Germany in Lithuania, and the United States in Poland. Although the lead nations provide at least the plurality of troops as well as command and control for each battlegroup, a number of allies are also contributing forces:

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- For the Canadian-led battlegroup in Latvia, Albania, Italy, Poland, Slovenia, and Spain are also contributing forces;
 - Denmark and France are contributing to the UK-led battlegroup in Estonia;
 - The U.S.-led battlegroup includes Romania and the United Kingdom; and,
 - Belgium, Croatia, France, Luxembourg, the Netherlands, and Norway will participate in the German-led battlegroup in Lithuania.



Figure 13. U.S.-led Battlegroup, Part of NATO's Enhanced Forward Presence Initiative, Welcomed in Piotrków Trybunalski, Poland in March 2017.¹⁴⁰

In the case of Germany's battlegroup to be stationed in Lithuania, the *Bundeswehr* units rotating into Lithuania will do so with their own unit equipment for each rotation, even though they are all likely to be mechanized infantry units. Rotations will be 6 months in duration. When it comes to infrastructure, the Lithuanian Government is paying for construction and upgrades of infrastructure above ground, while the German Government is paying for below-ground level construction such as utility lines.¹⁴¹ In some limited circumstances, both Germany and other countries contributing forces to the German-led battlegroup will fund the specialization of facilities in Lithuania that are necessary to support specific equipment brought by the sending states to Lithuania. In sum, Germany will spend just €20 million (euros) on infrastructure in Lithuania in 2017.¹⁴²

In the case of the UK-led battlegroup in Estonia, the host nation is paying for all infrastructure costs of the British, French, and Danish forces that will be rotationally based there. Moreover, the Estonians are picking up all recurring support costs, while the sending states will only pay for the transportation and operations of their own forces. In the view of one UK official involved in the negotiations, "the Estonians were very motivated."¹⁴³

Regarding the battlegroup in Latvia, the Canadian military is sending both a battalion headquarters staff as well as two companies worth of troops, for a total of roughly 445

personnel. The companies will periodically rotate, but the battalion headquarters staff will be forward-stationed, with accompanying dependents.

Marine Rotational Force-Darwin (MRF-D)

The Army might also look to the MRF-D, an example of which is depicted in Figure 14. Since 2012, the U.S. Marine Corps has rotated units of various sizes for several months at a time to Darwin, Australia. Based at Robertson Barracks and Royal Australian Air Force Base Darwin, the MRF-D comprises a Marine Air-Ground Task Force including ground, aviation, and logistics elements. Ultimately, the rotational presence there could number as high as 2,500 Marines. Although not a heel-to-toe rotation – Marines are typically in Darwin only from April to October each year, usually as part of a longer, 9-month rotation to Guam – the deployment may provide some lessons learned for the Army.



Figure 14. Australian Army Troops and U.S. Marines Conduct Training Together in the Northern Territory, Australia.¹⁴⁴

The Marines keep all the necessary equipment for MRF-D forward, in Australia, instead of rotating it in and out with each new deployment. This helps to keep transportation costs low, but this savings is offset by higher maintenance costs. MRF-D lacks intermediate-level maintenance capability in Australia, so equipment in need of any significant maintenance must be shipped elsewhere, often at great expense.

Given the unique training facilities in Darwin, MRF-D ground units typically develop increased readiness levels as a result of their training in Australia. In contrast, aviation units typically see readiness levels fall when they rotate to Darwin.¹⁴⁵

Australia has committed approximately \$11 million in both life support and operational facilities construction and upgrades since 2013.¹⁴⁶ However, through at least six

rounds of negotiations, the Marine Corps has continued to seek additional funding from Australia in order to increase the size of the annual rotations. Until that occurs, the rotations are unlikely to grow to their full potential of 2,500 Marines.¹⁴⁷

When it comes to political-military implications, the Marine Corps is particularly keen to ensure that MRF-D fulfills its assurance goals with regard to Australia, one of America's closest allies, even as drawn out negotiations over cost-sharing limit the size of MRF-D rotations. Over the last several years, as Chinese claims to sovereignty over practically all of the South China Sea have become more threatening to countries in the region, this assurance objective, and with it the role of MRF-D, has taken on increased salience.¹⁴⁸ Of course, Marine Corps leadership realizes this would be more effective in achieving assurance if families were forward also. The leadership is convinced that forward stationing **with families**, in contrast to the rotational presence of Marines alone, signals even greater assurance to allies and commitment on the part of the United States.¹⁴⁹

FINDINGS AND CONCLUSIONS

Comparing Expectations with Reality

In light of data and other evidence from actual rotations to Europe and South Korea, the original arguments in favor of rotational presence do not appear especially valid, undermining the case made in 2003-2004 and again in 2010-2011 that the Army could achieve key objectives such as deterrence and assurance more effectively and efficiently through increased reliance on rotational presence. With regard to fiscal costs, there is strong evidence to support the conclusion that in both the case of Europe and the case of Korea, the DoD is spending more than was originally anticipated, even in the absence of formal cost-benefit analyses. Rotational presence is more expensive than forward stationing, at least when the units in question are armored units taking their own equipment on each rotation and when excluding investments already made in extant infrastructure. This conclusion very likely also applies to other equipment-intensive units such as combat aviation brigades or air defense units. Moreover, if the recurring and one-time costs of additional Army force structure necessary to achieve continuous heel-to-toe presence is included, then it is quite clear that rotational forward presence costs more than forward stationing even when military construction is factored in.

Given higher-than-expected costs for rotational presence, this study engaged in an illustrative cost comparison exercise that indicates a return to forward stationing of an ABCT in Europe is feasible and reasonable from a fiscal cost perspective. The study showed that, given the military construction requirements necessary to forward station an ABCT in Europe, there are potentially short breakeven points depending on the alternative stationing scenario selected. An ABCT was selected for comparison because it is the type of unit currently rotated on a heel-to-toe basis and because it would most likely have an impact on deterrence and assurance—nonetheless, to achieve effective and efficient deterrence and assurance, other kinds of units, such as combat aviation, are necessary. In any case, it is very likely that other types of units that are equipment-intensive and that have equipment that is difficult to transport easily—such as combat aviation units—would have a similar comparative cost result as that shown for the ABCT.

In terms of diplomatic or political-military factors, it is clear that forward stationing is preferred by American allies overseas. Allies perceive forward-stationed forces as a sign of a stronger, more enduring commitment from the United States. The United States goes through no small effort to move and support a military service member and his/her family overseas—allies recognize this and have a clear preference for forward stationing over rotational presence. For their part, American military families act as de facto U.S. ambassadors, engaging with host nation neighbors, businesses, and others in a way that is not possible with rotational deployments. This contributes significantly to not just assurance but also to what has been termed strategic interoperability, building understanding and contributing to common perceptions of the world among the United States and its closest allies.

There are certainly exceptions to the notion that an American military presence is beloved around the world—the Marine Corps presence in Okinawa is the most obvious, but the Army has long managed noise complaints in locations such as Illesheim and Katterbach, Germany. However, it is also clear that overall, at local, regional, and central government levels, U.S. forward stationing is preferred by foreign officials and foreign citizens as a sign of enduring commitment. Indeed, the material benefits that come with forward stationing often mitigate the downsides associated with an American military presence, such as increased noise levels. American allies will accept a rotational presence if it is the only option available, but most evidence points to the conclusion that they prefer the constancy of forward stationing.

From a family readiness perspective, there is strong anecdotal evidence indicating both families and Soldiers are dissatisfied with the shift to a U.S.-stationed force. Soldiers and families feel as if they are being asked to take on many of the same hardships as for a wartime rotation, but without the moral and material rewards of a combat tour. A 30-day training rotation at the NTC, plus over 9 months of boots on the ground while on the rotational deployment to Europe or South Korea amounts to nearly a year away from home.

This strong anecdotal evidence on worsened morale appears to be reflected in lower reenlistment rates for rotationally deployed units during the year following their rotations to Europe or South Korea. In 3 of 4 cases examined, reenlistment rates for rotationally deployed units were lower than for all Army BCTs during the same 12-month period. Reenlistment rates for the forward-stationed 2nd Stryker Cavalry Regiment were higher—in some cases significantly higher—than for rotationally deployed units in the same 12-month timeframes.

In terms of unit training readiness, it seems clear that rotationally deployed units arrive in theater at a higher level of readiness for decisive action, and their very high OPTEMPO allows them to maintain that level of readiness throughout the 9-month deployment. Whether this really matters for the purposes of deterrence and assurance is unclear at best. Arguably, it is unlikely that America's adversaries or its allies recognize or care about the differences between an active duty ABCT that has just spent 30 days at NTC and one that has instead maintained readiness through training at the Joint Multi-national Readiness Center in Germany or the Rodriguez Live Fire Range in Korea.

Moreover, the training readiness advantages of a rotationally deployed unit are balanced out by the significantly higher manning rates of forward-stationed units and the fact that forward-stationed units typically are more knowledgeable of foreign culture,

military units, geography, political leaders, and military counterparts. Forward stationing yields more interoperable, culturally proficient forces. This results in benefits both vital—such as easier coordination and problem solving during times of crisis, according to available academic studies on interoperability—and mundane—such as fewer traffic violations thanks to familiarity with local laws and practices. Rotationally deployed units can achieve similar levels of interoperability and cultural fluency, but that knowledge base dissipates after 9 months, and a new commander with new troops must start over again.

Finally, despite the higher decisive action training readiness seen with regard to rotationally deployed units, in recent years some senior U.S. military commanders on the ground in Korea and Europe have expressed their preference for forward-stationed forces, publicly and privately. In some instances, some senior U.S. military commanders have expressed a preference for certain types of rotational forces in order to maintain an extremely high OPTEMPO or to reduce personnel churn.

Given the differing costs and benefits of forward stationing and rotational presence, it is clear that there is not a single answer that is applicable to all theaters at all times. In other words, when it comes to forward stationing or rotational presence, one size does not fit all. In fact, the right answer for a given theater may not be one model or the other, but rather a combination of both rotational presence and forward stationing, in order to maximize political-military influence, reduce fiscal costs to sustainable levels, leverage cost-sharing where possible and appropriate, minimize reduced morale associated with long rotational deployments, and ensure adequate equipment readiness, manning levels, and training readiness.

To some degree, this is what appears to be the case today in both Europe and South Korea, where rotational deployments augment the deterrence and assurance provided by forward-stationed units. However, this interpretation is only partially accurate—while it is true that rotational deployments are being used to supplement forward stationing, it is also true that there is **insufficient balance** in the Army's overseas presence model today. The pendulum has swung too far in the direction of a U.S.-stationed Army, yielding—necessitating even—an over-reliance on rotational deployments for continuous heel-to-toe presence to achieve deterrence and assurance.

On the one hand, the Army appears to have recognized this and has begun to earmark additional force structure for forward stationing in Europe, as part of an increase in end strength authorized by the 2017 National Defense Authorization Act (NDAA).¹⁵⁰ Although on the other hand, as this study went to press, the Army was still planning on further reductions of extant forward-stationed units in Europe.¹⁵¹ As the Army attempts to find balance in its approach to forward presence, much of the evidence as presented in this study points to the conclusion that the Army can more effectively and efficiently deter and assure through an increase in forward stationing, beyond that which exists today.

How Should the Army Increase Forward Stationing?

Clearly, increasing forward stationing requires delicate negotiation with potential host nations. Additionally, though, there is a domestic political dynamic that requires

equal attention and careful shepherding. Congress has only rarely embraced forward stationing of U.S. forces. In fact, history shows that since the Vietnam era, Congress has typically been ambivalent at best or occasionally opposed to forward stationing.¹⁵² Most members of Congress—but certainly not all—view forward stationing from a fairly parochial perspective, reasoning that they would rather see U.S. troops and families, and the additional spending those families bring, in **their** States or districts, vice overseas. For this reason, if the Army is to increase its presence overseas through forward stationing, it will be in a much stronger position vis-à-vis Congress if it does so through growth in end strength rather than through relocating a unit that is already stationed in the United States.

That said, decades of historical evidence point to one central conclusion regarding executive-legislative relations when it comes to overseas stationing strategy and policy. That is, when the executive branch leads forcefully on these issues, it nearly always overcomes Congressional resistance, even when relocating an extant unit from a U.S. facility to an overseas location.¹⁵³ Today, if the executive branch—led by the White House but reinforced with a clear consensus among the key national security agencies and departments—employs its considerable implicit and explicit authority in national security affairs and makes a strong case in favor of increasing the U.S. Army presence in Europe or South Korea it is very likely to overcome Congressional resistance, based on historical precedent.

Moreover, recent Congressional hearings indicate that U.S. legislators believe it is time to reinforce the Army's forward-stationed presence overseas. In particular, Senator John McCain (R-AZ), Chairman of the Senate Armed Services Committee, has been quite clear in his desire to see an increase in the size of the forward-stationed U.S. military. Chairman McCain has argued, "changes to force posture will be necessary" even though they will "not [be] budget neutral." For this reason, McCain argues that the United States must nonetheless "plan to spend additional resources over the next five years to reset our global force posture."¹⁵⁴

If members of Congress such as Senator McCain really wish to see increased deterrence of U.S. adversaries and assurance of U.S. allies, they could take two steps to explicitly rebalance overseas force posture. First, they could authorize a further increase in Army end strength—beyond the 16,000 additional personnel authorized in the 2017 NDAA—and require the Pentagon to forward station the additional forces in Europe and/or South Korea. This would eliminate the need for the Army to move a U.S.-stationed unit overseas in order to achieve greater balance in its force posture, something the Army has been extremely reluctant to do in recent years. The Army and the DoD can support this by educating Congress and explaining in Congressional testimony the importance of increased end strength for the purposes of forward stationing.

Second, Congress could authorize and appropriate funds to normalize more Army tours in South Korea, allowing single Soldiers, NCOs, and officers to serve 2-year tours and those with families to serve 3-year tours. Normalizing more Army tours in South Korea would not be inexpensive, but a standard length tour of duty there is likely to become increasingly attractive to the average Soldier. The massive, sprawling new facilities at Camp Humphreys will be among the newest and most modern in the entire Army. The construction of hundreds of new buildings and the addition of 2,300 acres to the

installation will make Humphreys one of the largest overseas U.S. facilities, with amenities not seen at most stateside bases. Moreover, 21st-century South Korea is an advanced country, home to the world's 11th largest economy, just behind Canada and just ahead of Russia and Australia, with per capita income of \$37,740 in 2016, just behind Japan but ahead of New Zealand, Spain, Italy, and Israel.¹⁵⁵ In sum, a tour of duty in South Korea in 2017 is completely unlike a tour there 40 years ago. The Army and the DoD can support tour normalization by educating and explaining to Congress the significant benefits in terms of interoperability, assurance, and increased morale among troops and their families.

What Should the Army Base Overseas?

One of the most significant recurring cost elements in the rotational deployment model is the cost of moving equipment, and the more equipment-intensive a particular type of unit is and the heavier its equipment, the more it costs to rotate it back and forth across an ocean, get it forward to operating sites in theater, and maneuver it for various exercises and training events. At the same time, the benefits of tactical and operational interoperability that come with forward stationing are **most** useful to those units that require the greatest depth of knowledge of local rules, regulations, customs, terrain, airspace, and counterparts. For these reasons, the Army should consider stationing in Europe an ABCT as well as combat aviation, air defense, command and control units, and related enablers.

In the case of Korea, the Army should return to a forward-stationed—or mostly forward-stationed—ABCT in Korea, and it should maintain combat aviation, air defense, division-level command and control, and related enabler units there. This is especially so if the prepositioned equipment set there—KEES—is dismantled or diminished **and** until port-to-fort infrastructure suitable for American M1s is appropriately upgraded between expanded U.S. facilities south of Seoul and the border with North Korea. Personnel churn of 8 percent per month on average associated with forward stationing in Korea diminishes the Army's "fight tonight" capability there from the perspective of unit training readiness, but rotational units have their own "fight tonight" hurdles, including reduced manning levels and a lack of cultural fluency and local knowledge. Moreover, since rotationally deployed troops remain subject to personnel moves out of theater, the personnel churn argument in favor of rotational deployments is rendered mostly moot.

Implicitly, the recommendations above point to relying on infantry brigade combat team (IBCT) or SBCT units for any necessary rotational deployments. However, given the negative personnel- and family-related repercussions associated with heel-to-toe rotational deployments (regardless of unit type), the Army should consider ending such rotations and instead conduct shorter-term, periodic but regular rotations of IBCT and SBCT units from the United States to Europe and South Korea. This would enable those units to experience overseas training environments, build familiarity with foreign partner militaries, and conduct deployment- and RSOI-related training.

Exercising deployment/RSOI for heavy and/or equipment-intensive units or those requiring in-depth specialized overseas knowledge through regular rotational deployments certainly builds unit readiness. Indeed, this is precisely the type of activity those U.S.-stationed units would conduct in the event of a major overseas contingency.

However, for the purposes of assurance and deterrence **today**, it is more effective and efficient for the United States to station those units overseas.

Where Should the Army Forward Station?

With regard to the Korean Peninsula, obviously additional forward-stationed units should be positioned in South Korea – there is little point in considering any other countries. In contrast, there are at least two significant options in Europe—Germany and Poland. Stationing an ABCT in Germany, along with combat aviation, air defense, artillery and rocket systems, command and control, and enablers necessary for effective and efficient deterrence and assurance, would have the benefit of getting those critical capabilities on the ground in theater. Given the challenges posed by Russia—with interior lines of communication and transportation—speed of assembly and movement is critically important to forward U.S. commanders.¹⁵⁶ Forward stationing in Germany would facilitate this, even though it could mean an end to heel-to-toe armored presence in Eastern Europe. As noted earlier, this study assumed that if armored and other critical units were forward-stationed **somewhere** in Europe, that Washington would discontinue heel-to-toe rotations of an ABCT to seven countries across Eastern Europe. Instead, it seems more likely that the United States would use its new forward-stationed forces, including an ABCT, to conduct periodic exercises across Eastern Europe, satisfying the requirement for efficient and effective deterrence and assurance.

At the same time, any increase in the Army's forward stationing posture is likely to have greater assurance and deterrent effects if it is stationed, in part or in whole, east of Germany. Poland's President Andrzej Duda gave voice to a view common among America's newest allies in NATO when he argued that the location of NATO's military facilities and force structure in Europe revealed that Germany is actually regarded as the alliance's eastern edge.¹⁵⁷ Duda is not alone among U.S. allies in Eastern Europe who believe that if they are truly to be the alliance's eastern flank, then NATO military forces ought to be arrayed permanently on Eastern European soil. For these and other reasons, it is clear that the assurance effect of forward stationing will be most significant if units are positioned in Poland.

There are also important operational reasons for stationing any additional units in Europe in Poland. First, Poland has much greater geographic depth than the Baltic States (see Figure 15). In the most dangerous conventional threat scenario of an overt Russia attack, U.S. forces in the Baltics might be quickly overrun, and reinforcement and resupply efforts would likely be very difficult, especially considering the rail gauge difference between the Baltic countries on the one hand, and Poland and most of the rest of Europe on the other.



Figure 15. Map of Poland.¹⁵⁸

Moreover, Poland is home to the Drawsko Pomorskie training area (DPTA), which at 340 square kilometers is far larger than training areas in any of the Baltic States. DPTA provides live-fire and maneuver training capabilities, and it has an airstrip, barracks, and a railhead with links to nearby Baltic Sea ports—including the port of Szczecin, which is just 55 miles away.

Additionally, Poland has been an eager consumer of American military hardware. Forward stationing American units in Poland would help to not only strengthen this trend, but it would also do much to spur increased interoperability between U.S. and Polish military forces.

Finally, Poland is eager to host American forces. Polish Government officials have privately and publicly evinced a willingness to cost-share, for example on forward operating sites used currently by rotationally deployed U.S. forces. If Washington can agree to joint use of any facilities that might permanently host U.S. forces forward-stationed there, Poland is more likely to provide infrastructure funding that could dramatically reduce the costs of forward stationing.¹⁵⁹

Of course, forward stationing anything larger than a battalion in Poland may be viewed by some U.S. allies in NATO as a violation of the NATO-Russia Founding Act. This political agreement—not a legally binding treaty—signed in 1997 committed the NATO allies to avoid permanently stationing substantial combat forces on the territory

of the former Warsaw Pact states.¹⁶⁰ At the same time, the NATO-Russia Founding Act obligates Russia to “exercise similar restraint in its conventional force deployments in Europe.” It is obvious that Russia’s illegal annexation of Crimea, its ongoing invasion of eastern Ukraine, and its massive exercises on the borders of NATO allies (such as the Zapad series) are not examples of “restraint.”¹⁶¹ Nevertheless, NATO remains for the time being committed to what some within the alliance consider the moral high ground, effectively hobbling itself through its overly restrictive interpretation of and adherence to the Founding Act.

It is possible that the United States could split-base an ABCT or other relevant units between Poland and Germany. At present, the only split-based brigade in the U.S. Army is the 173rd IBCT, with most units stationed in Vicenza, Italy, and some elements stationed in Germany. Split-basing presents major challenges for the brigade commander, but it may be a way to keep armor in Poland on a continuous basis while remaining below the Founding Act threshold.

Alternatively, it is certainly feasible that the United States could simply base an ABCT in Poland entirely outside the context of NATO. This would technically enable the United States to avoid running afoul of the Founding Act’s provisions. However, it is very likely that this act would not find favor in Berlin in particular, which would not draw so fine a distinction between a NATO-sanctioned forward-stationed ABCT and one stationed in Poland solely under the terms of an agreement between Washington and Warsaw.¹⁶²

Nevertheless, the United States and its allies must avoid falling into a short-term solution that proves ultimately problematic. Political sensibilities can evolve in countries like Germany – witness for example the dramatic changes that have occurred with regard to use of force and expeditionary operations by the *Bundeswehr*. With dialogue and negotiation, it may be possible to begin the long road to having NATO declare the Founding Act inoperative. This would facilitate a more strategic approach to forward stationing and the key, unique role it plays in deterrence and assurance.

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42. Interview with a civilian assigned to U.S. Army Europe's Deputy Chief of Staff, G3/5/7 Operations, May 4, 2017; Interview with a civilian assigned to Headquarters, Department of the Army (HQDA) Deputy Chief of Staff, G3/5/7 Operations, June 6, 2017.
43. Email exchange with a former senior advisor to General James L. Jones, who served as Commander of EUCOM and Supreme Allied Commander, Europe from 2003 to 2006, April 17, 2017.
44. Interview with a former senior advisor to General James L. Jones, April 21, 2017.
45. Interview with a former senior advisor to USAREUR commanders, April 19, 2017.
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46. Interview with a senior U.S. field grade officer assigned to 8th Army's Deputy Chief of Staff, G8 Comptroller, February 16, 2017, hereafter, Interview, U.S. officer, G8, February 16, 2017; Interview with a civilian assigned to HQDA, Deputy Chief of Staff, G3/5/7 Operations, June 6, 2017.

47. Interview with a senior U.S. field grade officer assigned to 8th Army's Deputy Chief of Staff, G4 Logistics, February 16, 2017.

48. Vincent Brooks, testimony before the Senate Armed Services Committee hearing on "Gen. Brooks Nomination," April 19, 2016, available from www.army.mil/article/166787/senate_armed_services_committee_hearing_on_gen_brooks_nomination.

49. Interview with a civilian staff member of the 8th Army's Deputy Chief of Staff, G1 Personnel, February 16, 2017.

50. Interview, U.S. officer, G8, February 16, 2017.

51. Interview with a field grade U.S. officer assigned to 2nd Infantry Division, Deputy Chief of Staff, G8 Comptroller, February 15, 2017.

52. *Ibid.*

53. Second Infantry Division staff are still assessing why rotational deployments cost more, yet entail reduced tank miles.

54. "United States Army Pacific Concept Paper: Pacific Pathways—An Army in Motion," pre-decisional draft as of October 23, 2013, developed by U.S. Army Pacific (USARPAC) G5, Fort Shafter, Hawaii, provided to the author.

55. Image sourced from U.S. Army photo by Sergeant 1st Class Adora Gonzalez, 25th Infantry Division, Public Affairs, September 20, 2014, available from www.flickr.com/photos/soldiersmediacenter/15146979780.

56. Wyatt Olson, "Pacific Pathways: Army prepares new tack for deploying forces in Pacific," *Stars and Stripes*, May 1, 2014, available from www.stripes.com/news/pacific/pacific-pathways-army-prepares-new-tack-for-deploying-forces-in-pacific-1.280623.

57. Sydney J. Freedberg, Jr., "Reinventing The Army Via 'Pacific Pathways'," *Breaking Defense*, February 13, 2015, available from breakingdefense.com/2015/02/reinventing-the-army-via-pacific-pathways/.

58. GAO, *Army Pacific Pathways: Comprehensive Assessment and Planning Needed to Capture Benefits Relative to Costs and Enhance Value for Participating Units*, GAO-17-126, Washington, DC: U.S. Government Accountability Office, November 2016.

59. Interview with a civilian assigned to HQDA, Deputy Chief of Staff, G3/5/7 Operations, June 6, 2017.

60. Interview with a senior U.S. field grade officer assigned to USAREUR, Deputy Chief of Staff, G8 Comptroller, August 16, 2016, hereafter, Interview, U.S. officer, USAREUR, G8, August 16, 2016.

61. FORCES was developed by the Cost and Economics Office of the Deputy Assistant Secretary of the Army to provide quick and reasonable unit cost estimates to a wide variety of users in the Army and other supporting agencies. The FORCES suite brings together into one family of models numerous sources of cost data, cost factors, and personnel and equipment densities. FORCES consists of the FORCES Cost Model (FCM), the Army Cost and Factors Handbook (CFH) the Army Contingency Operations Cost Model (ACM), and the End Strength Reduction (ESR) Model.

62. Interview, U.S. officer, USAREUR, G8, August 16, 2016.

63. Image sourced from photo by U.S. Army Staff Sergeant Timothy D. Hughes, Nowa Strategia.org, January 16, 2017, available from www.nowastrategia.org.pl/wp-content/uploads/2017/01/3100211.jpg.

64. EUCOM, "Armored Brigade Combat Team In Europe: Cost Comparison of Rotational Presence and Forward Stationing," December 28, 2016, p. 11.

65. Email correspondence with a U.S. field grade officer assigned to the Army's Deputy Chief of Staff, G8 Comptroller, February 16, 2017; interview with a U.S. field grade officer assigned to the Army's Deputy Chief of Staff, G8 Comptroller, June 6, 2017.

66. As cited in EUCOM, p. 13.

67. *Ibid.*, p. 11.

68. Email correspondence with a U.S. field grade officer assigned to EUCOM, Deputy Chief of Staff, G8 Policy, Strategy, Partnering and Capabilities, May 3, 2017.

69. Extrapolated from EUCOM, p. 11.

70. Azriel Bermant, *The Russian and Iranian Missile Threats: Implications for NATO Missile Defense*, Memorandum No. 143, Tel Aviv: The Institute for National Security Studies, November 2014, available from www.inss.org.il/he/wp-content/uploads/sites/2/systemfiles/memo143i.pdf.

71. EUCOM, p. 14.

72. Michael J. Lostumbo, Michael J. McNerney, Eric Peltz, Derek Eaton, David R. Frelinger, Victoria A. Greenfield, John Halliday, Patrick Mills, Bruce R. Nardulli, Stacie L. Pettyjohn, Jerry M. Sollinger, and Stephen M. Worman, *Overseas Basing of U.S. Military Forces: An Assessment of Relative Costs and Strategic Benefits*, Santa Monica, CA: RAND, 2013, p. 206, footnote 45.

73. "DoD Impact Aid Supplemental Program," U.S. Department of Defense Education Activity, n.d., available from www.dodea.edu/Partnership/supplementalProgram.cfm.

74. Ricky D. Gibbs, proj. man., *Force Reduction Assessment: Final Report*, Temple, TX: RDG Consulting, June 15, 2016, p. 5.

75. Interview with a U.S. field grade officer assigned to USAREUR, Deputy Chief of Staff, G3 Operations, December 14, 2016.

76. The European Reassurance Initiative (ERI) has been renamed the European Deterrence Initiative (EDI).

77. Email exchange with a civilian assigned to USAREUR, Deputy Chief of Staff, G8 Comptroller, May 25, 2017.

78. *Ibid.*

79. Lostumbo *et al.*, pp. xxvi-xxvii, 215.

80. Congressional Budget Office, "The U.S. Military's Force Structure: A Primer," July 2016, Washington, DC: Congressional Budget Office, U.S. Congress, pp. 1, 22. The costs to operate an ABCT rise to about \$2.6 billion per year if the costs of support units and overhead activities are included.

81. EUCOM, p. 12. EUCOM's cost estimate was computed using the FORCES model.

82. Interview with an Army civilian assigned to USAREUR, Deputy Chief of Staff, G3 Operations, May 4, 2017.

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83. EUCOM, p. 12.
84. *Ibid.*, p. 13.
85. Email exchange with an Army civilian assigned to USAREUR, Deputy Chief of Staff, G3 Operations, April 24, 2017.
86. *Ibid.*
87. DoD Area Cost Factors (ACF) PAX Newsletter No 3.2.1, UFC 3-701-01, March 25, 2015, incorp. Change 7, Washington, DC: Headquarters, U.S. Army Corps of Engineers, Table 4-1.
88. Adam Taylor, "Why Poland wants a U.S. military base," *The Washington Post*, June 3, 2014; and "Defence chief says Poland wants permanent NATO, U.S. presence," *Associated Press*, January 16, 2016.
89. Interview with two civilian staff members assigned to EUCOM, Deputy Chief of Staff, J5/8 Policy, Strategy, Partnering and Capabilities, August 9, 2016, hereafter, Interview, two civilian staff, J5/8, August 9, 2016.
90. Remigiusz Wilk, "Poland to spend 2.01% of GDP on defence in 2017," *IHS Jane's Defence Weekly*, September 2, 2016; and North Atlantic Treaty Organization (NATO) Public Diplomacy Division, "Defence Expenditures of NATO Countries (2009-2016)," press release, March 13, 2017.
91. Image sourced from Central Intelligence Agency, *The World Factbook 1994*, Washington, DC: Central Intelligence Agency, 1994, available from www.lib.utexas.edu/maps/europe/balticsearea.jpg.
92. "Founding Act on Mutual Relations, Cooperation and Security between NATO and the Russian Federation," signed in Paris, France, May 27, 1997, updated October 12, 2009, available from www.nato.int/cps/cn/natohq/official_texts_25468.htm.
93. "Kaliningrad Special Defence District (KOR)," GlobalSecurity.org, available from www.globalsecurity.org/military/world/russia/kor-kaliningrad.htm; and Bruce Jones, "Iskanders in Kaliningrad spooks Eastern Europe," *Jane's Defence Weekly*, October 14, 2016.
94. Email exchange with a civilian employee of USAREUR. This figure is based on the FORCES model and it assumes all new equipment procurement. If the Army were to borrow equipment from other sources, the figure could be as low as \$680 million. Of course, there would also be one-time military construction costs associated with maintaining the additional ABCT force structure in the Army inventory, but these costs are not considered here.
95. However, there is some anecdotal evidence that because rotational forces do **not** have families to return to on weekends, they get into trouble on weekends and have increased discipline issues.
96. Courtney McBride, "Hodges: Rotational ABCT is 'critical,' but cannot be sole priority," *Inside Defense*, June 20, 2017, available from insidedefense.com/daily-news/hodges-rotational-abct-%E2%80%98critical%E2%80%99-cannot-be-sole-priority.
97. HQDA, EXORD 165-16 ISO Fiscal Year 2016-2019 (FY16-19) Active Component Manning Guidance (ACMG), paragraph 3.B.5.B and Annex B.
98. Interview with a civilian staff member of the 8th Army's Deputy Chief of Staff, G1 Personnel, February 15, 2017.
99. Interview with a civilian assigned to HQDA Deputy Chief of Staff, G3/5/7 Operations, June 6, 2017.
100. Interview with senior military staff of the 2nd Infantry Division, February 15, 2017, hereafter, Interview, senior staff, 2nd Infantry Division, February 15, 2017.
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101. In the words of one senior military staff member of the 2nd Infantry Division, “there was almost always somebody around who knew where the training area is, or knows the culture, the politics, and the Korean counterparts.”

102. Interview with a general officer assigned to 8th Army Headquarters, May 15, 2017.

103. This assumes that enough transport equipment capable of moving heavy equipment by both road and rail are available—at present, this is not the case in Europe, where moving heavy armored equipment rapidly from the port to a forward operating site is a challenge.

104. Interview with staff assigned to USARPAC, January 25, 2017.

105. Image sourced from EUCOM photo taken by U.S. Army Staff Sergeant Jill People, June 8, 2017, available from www.eucom.mil/lmg/35758/Orig/united-states-european-command-image.

106. Interview with field grade U.S. officer assigned to USARPAC, Deputy Chief of Staff, G4 Logistics, January 25, 2017.

107. GAO, *Army Pacific Pathways: Comprehensive Assessment and Planning Needed to Capture Benefits Relative to Costs and Enhance Value for Participating Units*, GAO-17-126, Washington, DC: U.S. Government Accountability Office, November 2016, p. 16.

108. This is the case for the time being. The Army is considering dismantling or downsizing the KEES for requirements elsewhere, including Europe. If so, units that are rotationally deploying to South Korea may need to bring some or all of their own equipment—they will then realize the same deployment readiness benefits experienced currently by units participating in Pacific Pathways and in rotational deployments to Europe.

109. Interview with a general officer assigned to HQDA, G8 Comptroller, December 7, 2016.

110. Image sourced from U.S. Army National Guard photo by Specialist Seth LaCount, October 23, 2014, available from www.dvidshub.net/image/1631462/operation-atlantic-resolve.

111. Interview with a general officer assigned to USAREUR headquarters, August 16, 2016, hereafter, Interview, general officer, USAREUR headquarters, August 16, 2016; Interview with senior military staff assigned to 8th Army Headquarters, February 15, 2017; and Interview with the commander of a forward-stationed U.S. military unit in Europe, April 11, 2017, hereafter, Interview, commander, forward-stationed U.S. military unit, Europe, April 11, 2017.

112. Interview, commander, forward-stationed U.S. military unit, Europe, April 11, 2017. This individual relayed a conversation he had with a Polish counterpart, who was complaining about higher vehicular accident rates among rotationally deployed U.S. forces.

113. René Moelker, Joseph Soeters, and Ulrich vom Hagen, “Sympathy, the Cement of Interoperability: Findings on Ten Years of German-Netherlands Military Cooperation,” *Armed Force & Society*, Vol. 33, No. 4, July 2007, pp. 496-517.

114. Interview, general officer, USAREUR headquarters, August 16, 2016; Interview with a general officer assigned to USAREUR headquarters, September 26, 2016; Interview, senior staff, 2nd Infantry Division, February 15, 2017; Interview with a general officer assigned to 8th Army Headquarters, February 16, 2017, hereafter, Interview, general officer, 8th Army Headquarters, February 16, 2017; Andrew Tilghman, “Top general wants more soldiers in Europe,” *Military Times*, April 21, 2016; and Major General David Allvin, “Telephonic Press Briefing on the European Reassurance Initiative Hosted by the Brussels Media Hub,” February 29, 2016.

115. Interview, general officer, USAREUR headquarters, August 16, 2016.

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116. Allvin.
117. John Vandiver, "Breedlove: No substitute for permanent US military presence in Europe," *Stars and Stripes*, February 25, 2015.
118. John Vandiver, "Breedlove tells Congress US must rebuild forces in Europe to confront newly aggressive Russia," *Stars and Stripes*, February 25, 2016.
119. Email exchange with a senior civilian assigned to USAREUR headquarters, May 5, 2017, hereafter, Email, senior civilian, USAREUR headquarters, May 5, 2017; Interview with a senior military commander assigned to 8th Army, May 15, 2017.
120. Interview with the commander of a rotationally deployed U.S. military unit, December 8, 2016, hereafter, Interview, commander, rotationally deployed unit, December 8, 2016.
121. Email exchange with a senior civilian assigned to USAREUR headquarters, October 21, 2016.
122. Image sourced from U.S. Army photo in U.S. Army Europe, "German Minister of Defense visits U.S. Army Europe," U.S. Army website, August 10, 2016, available from <https://www.army.mil/a/173102/>.
123. Thomas E. Ricks and Jason Dempsey, "Our Generals Failed in Afghanistan," *Foreign Policy*, October 18, 2016, available from foreignpolicy.com/2016/10/18/our-generals-failed-in-afghanistan/.
124. Interview, general officer, USAREUR headquarters, August 16, 2016.
125. John R. Deni, "Maintaining transatlantic strategic, operational and tactical interoperability in an era of austerity," *International Affairs*, Vol. 90, No. 3, May 2014, pp. 583-600.
126. Email, senior civilian, USAREUR headquarters, May 5, 2017.
127. Interview with a senior political appointee in the Polish Ministry of Defence, March 2, 2016.
128. Interview with 8th Army Headquarters staff, February 15, 2017; Interview, general officer, 8th Army Headquarters, February 16, 2017.
129. Rotational deployments to South Korea are funded out of the Army's base budget.
130. Email, senior civilian, USAREUR headquarters, May 5, 2017.
131. Interview with a U.S. Army War College (USAWC) research professor, March 28, 2017.
132. Interview with the commander of a rotationally deployed U.S. military unit, March 24, 2017.
133. Interview, commander, rotationally deployed unit, December 8, 2016.
134. Interview with a field grade U.S. officer assigned to EUCOM Deputy Chief of Staff, J5/8 Policy, Strategy, Partnering and Capabilities, August 9, 2016; Interview, two civilian staff, J5/8, August 9, 2016; Interview, general officer, 8th Army Headquarters, February 16, 2017; and Interview, commander, forward-stationed U.S. military unit, Europe, April 11, 2017.
135. Email correspondence with a U.S. field grade officer assigned to the Army's Deputy Chief of Staff, G1 Personnel, April 21, 2017.
136. Interview with a U.S. field grade officer assigned to the Army's Deputy Chief of Staff, G1, March 31, 2017.
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137. Based on raw monthly reenlistment data provided by a U.S. field grade officer assigned to the Army's Deputy Chief of Staff, G1 Personnel, March 29, 2017.

138. Based on raw monthly reenlistment data provided by a U.S. field grade officer assigned to the Army's Deputy Chief of Staff, G1 Personnel, May 8, 2017.

139. It is possible that lower reenlistment rates for each of these units during each of the 12-month periods following their rotational deployments is due to something **other than** their recently completed rotations. For example, climate command surveys might indicate that other explanations exist for the lower reenlistment rates. Unfortunately, according to researchers at the U.S. Army Research Institute for the Behavioral and Social Sciences, the Defense Equal Opportunity Management Institute (DEOMI), which maintains Command Climate Survey data, has been unwilling to provide that data to the Army Research Institute or other outside researchers.

140. Image sourced from Multinational Corps Northeast (NATO), March 28, 2017, available from www.flickr.com/photos/mncne/33573164411/.

141. Interview with a civilian staff member at the German Ministry of Defence, September 6, 2016.

142. Email exchange with a civilian staff member at the Germany Ministry of Defence, May 3, 2017.

143. Email exchange with a civilian staff member of the UK Mission to NATO, May 5, 2017.

144. Image sourced from U.S. Marine Corps photo by Corporal Mandaline Hatch, May 19, 2016, available from <https://www.dvidshub.net/image/2598964/combat-engineers-clear-way>.

145. Interview with a retired Marine Corps field-grade officer now working for Marines Corps Forces, Pacific (MARFORPAC), February 3, 2017, hereafter, Interview, retired Marine Corps officer, February 3, 2017.

146. Defence Media Operations, "Parliamentary Secretary for Defence - Contract awarded for Defence facilities to support US Marines," Media release, Australian Government, Department of Defence, October 11, 2013.

147. Matthew L. Schehl, "U.S., Australia delay plans to send more Marines Down Under," *Marine Corps Times*, June 10, 2016.

148. Bert Chapman, "China's Nine-Dashed Map: Continuing Maritime Source of Geopolitical Tension," *Geopolitics, History, and International Relations*, Vol. 8, No. 1, 2016, pp. 146-168.

149. Interview, retired Marine Corps officer, February 3, 2017.

150. Interview with a general officer assigned to HQDA, G8 Comptroller, May 17, 2017.

151. Meetings conducted at Headquarters, USAREUR in early May 2017, revealed that the 5th Signal Command was still slated for inactivation, as announced in November 2016.

152. John R. Deni, *The Future of American Landpower: Does Forward Presence Still Matter? The Case of the Army in Europe*, Carlisle, PA: Strategic Studies Institute, U.S. Army War College, 2012.

153. Phil Williams, *The Senate and U.S. Troops in Europe*, London: Macmillan Press, 1985; Deni, *The Future of American Landpower*.

154. John McCain, "Restoring American Power: Recommendations for the FY 2018-FY 2022 Defense Budget," Washington, DC: Senate Armed Services Committee, 2017, p. 19, available from www.mccain.senate.gov/public/_cache/files/25bff0ec-481e-466a-843f-68ba5619e6d8/restoring-american-power-7.pdf.

155. International Monetary Fund, “World Economic Outlook Database,” April 2017, available from www.imf.org/external/pubs/ft/weo/2017/01/weodata/index.aspx.

156. David Vergun, “Exercises Focus on Speed, Army’s Commander in Europe Says,” *Army News Service*, December 9, 2015.

157. Henry Foy, “NATO Treats Poland Like a Buffer State, Says New President,” *Financial Times*, August 13, 2015.

158. Image sourced from Central Intelligence Agency, “The World Factbook,” Washington, DC: Central Intelligence Agency, last updated July 11, 2017, available from <https://www.cia.gov/library/publications/resources/the-world-factbook/geos/pl.html>.

159. Interview with a civilian staff member at USAREUR, May 4, 2017.

160. Today within the halls of NATO, substantial combat forces are viewed as any brigade-sized or larger maneuver unit.

161. Tomasz K. Kowalik and Dominik P. Jankowski, “Zapad 2017: NATO Should Be Keeping an Eye on Russia’s Training Exercises,” *The National Interest*, May 7, 2017, available from nationalinterest.org/feature/zapad-2017-nato-should-be-keeping-eye-russias-training-20540.

162. Interview with a German general officer, May 4, 2017.

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