

The Abilities of the British, French, and German Armies to Generate and Sustain Armored Brigades in the Baltics

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Key findings

- Britain, France, and Germany could each muster and sustain a heavy brigade, albeit at different rates; sustaining these forces would also require significant strain.
- Britain and France would be able to marshal and sustain at least one battalion-size combined arms battle group within a few weeks, with Germany perhaps taking longer. The French probably would arrive first, possibly within the first week.
- Surging more forces to get the deployments up to brigade strength would take more time: a few weeks in the French case and possibly more than a month in the British or German case.
- For all three armies, the effort would be a major endeavor that would leave the forces with little spare capacity for any other contingencies. There are also questions about the capabilities that those forces might have at their disposal or their aptitude for the kind of warfare that fighting the Russians might involve.

SUMMARY ■ In previous RAND Corporation studies, we examined how key North Atlantic Treaty Organization (NATO) countries—especially Britain, France, and Germany—had been cutting their military budgets and restructuring their forces in light of perceived risk, with the net result that they have reduced their abilities to generate and sustain forces while also reducing their capacity to engage in high-end conventional warfare against peer or near-peer opponents. They made these reductions by balancing the desire to preserve as much capability as possible against fiscal exigencies and their views of the kinds of operations in which they would most likely be engaged. Since then, however, the Russian intervention in Ukraine has revived the possibility of a land war against a peer adversary while also suggesting scenarios in which the three countries might need to deploy highly capable forces quickly to potential flash points, such as the Baltics.

This report, based on research conducted in 2016 and information valid at that time, assesses the capacity of three of our major NATO allies—Britain, France, and Germany—to generate and sustain armored units for a hypothetical deployment to the Baltics. Could they each muster a full brigade? How quickly could they do that, and for how long?

We found that the three countries each could muster and sustain a heavy brigade, albeit at different rates; sustaining these forces would also require significant strain. More specifically,

Britain and France would be able to marshal and sustain at least one battalion-size combined arms battle group within a few weeks, with Germany perhaps taking longer. The French probably would get there first, possibly within the first week. Surging more forces to get the deployments up to brigade strength would take more time: a few weeks in the French case and possibly more than a month in the British or German case. For all three armies, the effort would be a major endeavor that probably would leave the forces with little spare capacity for any other contingencies, and there are questions to be asked regarding the capabilities that those forces might have at their disposal or their aptitude for the kind of warfare that fighting the Russians might involve. For the French, the essential problem is that their army already is badly overstretched; for the British and Germans, the problem is the size of their deployable force, although both now are working to expand that size.

INTRODUCTION

In earlier RAND studies published in 2012 and 2013—before Russia’s February 2014 invasion of Ukraine—we examined how key NATO allies and, in particular, the armies of our three militarily most capable NATO allies (Britain, France, and Germany) were dealing with austerity budgets.¹ Besides trimming their forces significantly, they were engaging in restructuring efforts intended to help them maintain as many capabilities as possible, even if only to preserve just enough capability to be able to regenerate forces later. They prioritized capabilities, moreover, according to perceived risk and their understanding of the relative likelihood of getting involved in different kinds of operations. Because high-intensity conventional conflicts against peer or near-peer adversaries seemed implausible, cutting back on the number of main battle tanks, for example, appeared to be a safe bet and an obvious choice as a money-saving initiative. In contrast, relatively small and short-term missions or long-term but low-intensity operations (such as Afghanistan, France’s Opération Licorne in the Ivory Coast, or myriad peacekeeping or stability operations) seemed more likely. It follows that the three countries have—compared with just a decade ago—reduced their ability to deploy and sustain forces, and they are less capable of facing a peer or near-peer threat.

Russia’s invasion of Ukraine underscored the revived possibility of a high-end conventional war in Europe and thereby raised the importance of the capacity of NATO allies—particularly West European allies—to deploy and sustain forces outside their borders. Moreover, recent RAND work regarding the possibility of defending the Baltics against a hypothetical Russian threat has underlined the particular importance of quickly being able to put boots on the ground, including heavy armored forces: “A force of about seven brigades, including three heavy armored brigades . . . could suffice to prevent the rapid overrun of the Baltic states.”² Speed would be critical, given the Russians’ greater numbers in the immediate vicinity, which would enable Russia to reach the Baltic capitals in a matter of days.³

After decades of restructuring and reduction, it has become urgent to determine what remains of the allies’ ability to engage in conventional warfare and to deploy armored forces. Allied planners need to know with precision how many allied units are good enough and ready enough to deploy quickly and face

Russian ground forces, as well as how many might be available at an appropriate time to relieve those sent initially.

This report looks specifically at the ability of the British, French, and German armies to generate heavy armored brigades for a hypothetical open-ended deployment, if the deployment order came today. By *heavy*, we refer to formations equipped with main battle tanks, as well as other armored vehicles and infantry. How quickly could NATO’s three most capable militaries bulk up the alliance’s presence on the ground so that it would constitute a credible deterrent? And for how long could they maintain it?

Precise answers to these questions would require access to classified readiness reporting. Because this work is meant to be unclassified, we neither sought nor obtained access to such information and instead did what we could to obtain approximate answers. We leveraged earlier work and updated it by drawing on more recent British, French, and German government documents; articles written by military officers that have appeared in official and semiofficial military publications; and the British, French, and German press. We also consulted with British, French, and German defense analysts, whose assessments helped us move beyond official descriptions of what the three militaries have and can do. Finally, we had conversations with the British, French, and German defense attachés in Washington, D.C. The analytical conclusions presented here are our own, but the missions helped by fact-checking certain assertions.

It must be understood that while we base our assessment largely on what we know about the current status of the allies’ force structures and their force generation and readiness policies, the scenario we have in mind would represent a significant departure from the status quo. In other words, a scenario that would require deploying armored brigades to Russia’s doorstep—a scenario in which even the Germans would feel compelled to deploy a large ground force outside its borders, where it might battle Russian ground forces—would represent a major crisis. In such a crisis, the three countries might be motivated to set aside existing force generation schemes or policies regarding such matters as leave and the length of overseas deployments. They might make vastly greater resources available to their militaries and significantly reprioritize resource allocation within current budgets and deployments. Such shifts might not make much of a difference in the first hours and days after a deployment order, but they could make a significant difference afterward, particularly with respect to scaling the forces up to brigade size and

sustaining them in place. Moreover, to the degree that there is some warning or, at the very least, a progressive decline in relations with Russia leading up to a crisis in the Baltics, the three powers could make adjustments and shift resources before a deployment order that would facilitate a rapid response. Prepositioning equipment or the forward-deploying units would obviously help.

Absent from our analysis is any real examination of what it would take for mobilized units to reach the Baltics. The more urgently that allied forces need to reach the Baltics, the more they would have to rely on airlift. What American planners need to understand is that the more the allies would have to rely on airlift, the more they would require U.S. assistance: Of the three countries assessed here, only the United Kingdom has a fleet of C-17s or comparable heavy-lift aircraft. The biggest plane in the French and German inventories is the A400M, which can lift 25 tons, roughly the weight of a single French infantry fighting vehicle, although less than the weight of a German one. Together, France and Germany have only about a dozen A400Ms. During Opération Serval, France—just prior to receiving its first A400M—relied on allies' C-17s and contract Ukrainian and Russian airlift. France used a naval ship to transport 36 infantry fighting vehicles to Mali, the heaviest vehicles deployed there. In our Baltics scenario, Russian contract lift presumably would be out of the question. Ukrainian companies might still be available.

Similarly, one should not assume that sufficient rail capacity exists to transport rapidly large formations to the Baltics, presumably through Germany and Poland. The arrangements, plans, and resources that had been in place during the Cold War to ensure the movement of allied and German personnel and equipment require updating; the railroads in the Baltics use a different gauge, something that needs to be addressed in mobilization plans.

We also have not considered the allies' ground-based air defense capabilities or other key support capabilities, such as bridging, which exist but might not be adequate for operating in Eastern Europe against Russia. We also have not considered what would happen were there actual combat. That would raise altogether different questions about the militaries' capacities to replenish ammunition, equipment, and parts, as well as to replenish units' manpower or relieve them.

Lastly, although much will depend on the political will of the three countries considered here to act, as well as NATO's ability to make decisions rapidly, we do not speculate as to

whether or in what circumstances there will be sufficient resolve.

In the following sections, we discuss our assessments for each of the three countries and then close with some overall conclusions.

BRITAIN

The British Army has been subject to major cutbacks over the past decade, which significantly reduced the size of the force (currently on track to decline to 82,000 service personnel) and its ability to deploy and sustain forces abroad.⁴ As of June 2016, the British Army included

- three armored regiments, each with 48 Challenger II main battle tanks
- three armored cavalry regiments, each with 48 Combat Vehicles Reconnaissance (Tracked)
- six armored infantry regiments, each with 42 infantry fighting vehicles.

There is, however, a great deal of uncertainty over the future of the British Army force structure. The 2010 edition of the *Strategic Defence and Security Review* (SDSR) introduced significant changes to the Army's force structure and promoted a blueprint for the Army referred to as Future Force 2020.⁵ This plan was still being implemented when, in November 2015, a new SDSR made several modifications while leaving out a number of important details.

Among the measures the British began taking per Future Force 2020 was dividing the Army into two forces. One was a rump conventional army, known as the Reaction Force, which would be able to react quickly and retain the capabilities required for high-end conventional warfare. Future Force 2020 called for the Reaction Force to consist of the light 16th Air Assault Brigade and three armored infantry brigades (complete with heavy, tank-equipped units). The other force is the Adaptable Force, whose seven middle-to-light brigades generally are maintained at a lower level of readiness and are geared for stability operations.

The 2015 SDSR retains the basic Reaction/Adaptable split, while promising to boost the size of Britain's deployable force from the 30,000 planned in Future Force 2020 to a total of about 50,000. The plan also changes the composition of both the Reaction and Adaptable Forces. The Reaction Force, in lieu of the three armored infantry brigades, will have

two armored brigades and two “strike brigades,” presumably middleweight mechanized infantry. It is not clear what will become of the tank regiment in the third armored brigade now slated for disbanding; its component units might be repurposed and assigned to one or both of the strike brigades. The two armored brigades would take turns maintaining a high state of readiness. The 2015 SDSR also calls for cutting the Adaptable Force from seven infantry brigades to six, and some of this would be converted into counterterrorism or security assistance units, probably of smaller size. Again, details are not yet available. In any event, the new SDSR establishes as an objective the ability to deploy an entire division consisting of “three brigades including a new Strike Force” and sustain that force indefinitely.⁶ We cannot judge how far along the British Army is toward making that objective a reality; the Army insists that implementation of its plans are well under way. It similarly is not clear how large of an armored force that division might include.

With respect to readiness, Future Force 2020 called for the three armored infantry brigades to rotate responsibility for keeping a “Lead Armoured Task Force” at a high state of readiness, while the 16th Air Assault Brigade rotated its subordinate units to maintain an “Air Assault Task Force” at perhaps the British Army’s highest state of readiness. Judging from exercises held in 2015, a Lead Armoured Task Force might be the equivalent of one or two battalions in size and possess a full gamut of British Army armored vehicles (tanks, infantry fighting vehicles, and armored personnel carriers), as well as Apache helicopters and anything else in the British inventory appropriate for high-end conventional warfare.⁷ According to defense analysts interviewed for this study and other sources, while the first light infantry echelons of the Lead Armoured Task Force might be ready in a matter of a few days after a deployment order, the armored elements would take more time. The whole formation probably would be ready within 30 days. Scaling up to a full armored brigade probably would require months (60–90 days) to mobilize. As for how the 2015 SDSR would affect Britain’s ability to mobilize and sustain a Lead Armoured Task Force, instead of rotating responsibility among three brigades, the two remaining armored formations would alternate, with one brigade “on” while the other was “off.”

Ultimately, the 2015 SDSR—which also includes increased spending on special forces—appears to enhance Britain’s ability to deploy light-to-medium forces, possibly at the expense of its ability to deploy heavier formations.

Indeed, one analyst concludes that Britain’s new force structure would result in a lessening of its heavier assets, including tanks and heavy artillery.⁸ One might even go so far as to argue that Britain risks watering down its medium assets: The number of new Ajax tracked reconnaissance vehicles on order—the surviving remnant of the largely failed Future Rapid Effect System (FRES) program akin to the U.S. Army’s Future Combat Systems—has not increased even though they will be spread among more brigades, and Britain is still at pains to come up with a new eight-wheeled infantry fighting vehicle.⁹

There are many questions regarding how long the British could sustain a brigade-sized or larger armored force once it was in place. Future Force 2020 provided for sustaining a brigade for at least 18 months by rotating the three armored brigades in the Reaction Force. At 18 months, the UK would run into problems because of Britain’s force generation policies, among them the Harmony Guidelines that limit the amount of time British personnel can serve overseas within a 36-month period.¹⁰ Already the UK has announced its intention to switch from its three-year force generation cycle to a two-year cycle.¹¹ Britain could suspend its policies to keep more troops in the field for longer or shorten the time between deployments. There is another issue with the infantry brigades in the Adaptable Force: They are, by design, hollow units because they are intentionally understaffed and must draw on the British Army’s underdeveloped reserves to fill out their ranks.¹² Whether the United Kingdom could rely on the Adaptable Force to provide the force levels necessary to sustain an armored brigade deployment in rotation with the two Reaction Force armored brigades is an open question.

The 2015 SDSR creates new questions. How exactly would the Army’s force generation cycle work such that it could sustain an armored brigade or a full division? Would the Army stick to the current Harmony Guidelines? Details are still emerging.

Ultimately, the United Kingdom appears capable of sustaining a deployed armored brigade indefinitely, even if many of the details regarding how remain unknown. This goes back to the caveat cited above: A crisis with Russia sufficient to motivate deploying large ground forces to the Baltics plausibly would motivate policymakers to chart altogether new defense planning policies, including spending significantly more money.

British Army Conclusions

- The British Army can provide an armored task force within 30 days and would require between 30 and 90 days to scale up to a full armored brigade.
- Britain should be able to sustain at least one armored brigade indefinitely, although there are lingering doubts associated with the undermanned nature of the Adaptable Force, which will be called upon to provide units to relieve the units of the Reaction Force.

FRANCE

The roughly 105,000-strong Armée de Terre is the largest of the three ground forces and arguably the most capable as well. However, the challenge for the French is that their army is badly overstretched. Of particular note is the open-ended Opération Sentinelle, France's military response to the terrorist attacks of 2015. Sentinelle currently involves roughly 10,000 service personnel who actively guard "sensitive public places," including airports, train stations, Jewish schools, kosher restaurants, and synagogues.¹³ At the same time, large numbers of French troops are committed to overseas operations or manning France's remaining overseas garrisons in present or former territories. For example, as of summer 2016, Opération Barkhane in the Sahel stood at 3,500 troops, while several hundred were serving in the Central African Republic under Opération Sangaris.¹⁴ Thousands of other French troops were serving elsewhere in such countries as Senegal and Gabon or in France's overseas territories. Finally, while French forces have not been cut to the same extent as the British and German forces, more than a decade of budget reductions translate into a force that can often be described as threadbare—particularly in reference to some of its aging vehicle fleet—and lacking in any excess capacity or slack.

French policy currently provides for deploying an "immediate reaction joint force" within seven days (2,300 soldiers—1,500 of them from the ground forces—drawn from a "national emergency echelon" of 5,000 kept at a high state of readiness, according to the 2013 *Livre Blanc*).¹⁵ This translates roughly into two French battalion task forces or *groupements tactiques interarmes* (GTIAs; combined arms tactical groups). One would be light, the other medium or heavy. A French armored GTIA might include any combination of armor and mechanized units, tanks, infantry fighting vehicles, and other armored vehicles, depending on assessed require-

ments and availability. The French are adept at scaling up their forces, meaning that they would not have a problem expanding and splitting up an initial GTIA as needed as more and more units arrived. However, pulling together a full armored brigade would take time and stretch over several weeks, partly because so much of the Armée de Terre's equipment is scattered about the globe. It took France roughly two and a half weeks to assemble a brigade with roughly 3,000 soldiers in Mali for Opération Serval; a heavier force probably would take longer. According to the French military experts consulted for this study, for France to keep a brigade in place for more than a year, it likely would have to reduce other operations, alter current force generation policies, or, most likely, both. That said, the French are already moving to increase the Armée de Terre's capacity: President François Hollande, because of Opération Sentinelle, decided in April 2015 to grow the army for the first time since the Algerian War. France is adding 11,000 personnel to its 66,000-strong deployable forces, which translates into adding new infantry regiments and reinforcing others.¹⁶ More hands will help, but the additional recruitment has begun only recently, meaning that those extra hands will not be available for some time.

In addition, in May 2015, the French launched a new organizational plan intended to help spread the burden of Sentinelle without diminishing capabilities. More specifically, the French have revived the division, standing up two divisions of maneuver units. Altogether, this operational force, referred to as Combined Arms Force Scorpion (Scorpion is the name of the Armée de Terre's long-standing modernization program, thus emphasizing the modern, "digitized" nature of the ground forces that the French now field), is distinct from a large array of combat support and combat sustainment support regiments organized into four functional brigades (intelligence, logistics, etc.). Within Scorpion, the First Division has four brigades, including the Franco-German Brigade, while the Third Division has three brigades. France will retain its two heavy brigades, the 2nd and the 7th, one in each division, and its three armored regiments (one in the 2nd and two in the 7th, each with about 800 soldiers and 52 tanks in its Table of Organization and Equipment).¹⁷ France also has five mechanized infantry regiments, each equipped with 64 state-of-the-art infantry fighting vehicles. The bottom line appears to be a reshuffling of the Armée de Terre's units, but with no diminution of its capabilities. Those capabilities, however, are not increasing. Rather, the French have the more modest ambition of enhancing their

capacity to maintain their current operational tempo, notwithstanding Opération Sentinelle.

One issue yet to be determined is how Sentinelle and France's other ongoing operations affect Armée de Terre readiness and training over the long term. The force that invaded Mali in January 2013 was, in many regards, at the top of its game, following upgrades to equipment and training associated with Afghanistan. Patrolling the streets of Paris or keeping watch over Jewish schools does not lend itself to preparing for high-intensity combat, however, nor is it likely to be as useful an experience as operating in the Sahel. According to one report, in 2015, the Army canceled 70 percent of the scheduled rotations of units through France's specialized warfare training centers.¹⁸ Similarly, whereas the budget law calls for units to undergo 90 days of general training each year (as distinct from specialized predeployment training), the numbers in 2015 fell to between 51 and 64 days.¹⁹ The Armée de Terre general staff noted, moreover, a net "progressive erosion" of Army's capacity to train, something that is particularly problematic, given plans to recruit heavily and induct 14,000 new soldiers.²⁰ A French defense analyst interviewed for this study insisted that because of Sentinelle, only the troops slated for Barkhane and Sangaris were receiving adequate training, while other units simply were not being prepared for combined arms warfare. He further insisted that the Armée de Terre of 2016 might not be capable of what the Armée de Terre of 2013 did in Mali because of its diminished combined arms skills. This suggests that even if the French could muster rapidly armored forces for operations in the Baltic states, French units might be ill-prepared to fight the Russians. Another problem: While the French military prides itself on its ability to "rough it," particularly in such places as Africa, conditions reported by troops serving in the homeland with Sentinelle are surprisingly poor and are having a demoralizing effect on the force.²¹

There is also the question of wear and tear on French military equipment, which is increasing costs while eroding readiness. To put the matter in the simplest terms, the French are using their equipment far more than they had in the past, and they are using their equipment in the harshest environments imaginable, which has the effect of magnifying the cost in terms of wear and tear per kilometer or hour of use. For example, according to a December 2015 report to the Assemblée Nationale, a Véhicule de l'Avant Blindé (VAB)—the standard Armée de Terre armored personnel carrier—deployed to Mali as part of Opération Serval

in 2013–2014 was likely to have traveled in one week four times the distance it would normally be expected to travel in France in an entire year of routine use.²² Moreover, a kilometer traveled in Mali is not the same as one in France, given the road conditions and extreme temperatures in the Sahel. The kinds of mechanical problems that today plague French vehicles correlate directly with intense use in rough field conditions.²³ Fixing those problems and returning vehicles to the "ready" pool (the Armée de Terre manages its vehicle fleet using a rotational equipping system) requires more time and money than is normally the case.²⁴ Another problem related to the overall size of France's equipment stock relative to their operational requirements is that the French have been rushing a number of vehicles and equipment sets directly to the field before putting them through any testing or "shakedown" exercises that might reveal problems ahead of time. Instead, the problems that came to light emerge at the worst time possible: when being used operationally in the field.²⁵ The French are also grappling with an increased rate of attrition owing to acts of violence or simple accidents. Between 2008 and 2012, according to the Assemblée Nationale report, the Armée de Terre lost ten vehicles a year because of hostile acts or accidents; since 2013, the rate has tripled to 30 vehicles per year.²⁶ The general result is an overall decline in the availability of equipment sets and vehicles: Troops in the field are receiving what they need, but only just, and equipment is becoming less available for all other purposes.²⁷ The report concludes that the overall situation is such that while France may be managing to sustain its current operations, it will struggle to do so in the long term, and, similarly, any new obligations would strain French military capacity significantly.

Armée de Terre Conclusions

- France can probably field one medium or heavy battalion task force within a week. Generating the equivalent of a full armored brigade probably would take several weeks to a month.
- However, the toll of France's ongoing operations—especially Opération Sentinelle—on Armée de Terre readiness introduces a significant degree of uncertainty regarding France's capacity to sustain a brigade and that brigade's proficiency. This uncertainty will linger until France finds a way to lighten the load currently carried by its ground forces, particularly the army's homeland security operations, while also growing the overall size of the force.

GERMANY

Until 2015, the Germans had been engaged in several initiatives to reduce and reshape their force structure, primarily to reduce costs but also to transform a large conscription-based force designed to fight the Warsaw Pact into an all-volunteer expeditionary force capable of participating in overseas stability operations. The changes had come at the cost of diminishing the German military's capacity generally and, in particular, its ability to field heavy units. However, the Ukraine crisis and the revived possibility of a conflict with Russia once again made those conventional capabilities a priority, while revealing the extent of the Germans' deficits. In effect, the *Deutsches Heer* (German Army), which can only just sustain relatively light stability operations abroad, is now being asked *also* to be able to field a high-end conventional continental force rapidly. Its ability to do so is limited, although the German government has committed itself to rectifying the situation, at least on paper.²⁸

The Heer is by all accounts smaller than ever, although precise numbers are surprisingly difficult to come by. Officially, the Heer is now down to 60,000 servicemembers (as of August 22, 2016), compared with 100,000 in 2010.²⁹ However, the Germans do not count a significant number of people who may wear Heer uniforms and who provide various support functions to the Heer, yet who nonetheless technically belong to what they term "Joint Support" (*Streitkräftebasis*) and not the Heer. There presently are about 41,000 personnel listed as Joint Support; some portion of them would, in another military, be counted as Heer, making the real size of the *Deutsches Heer* somewhere between 60,000 and 100,000.

According to a 2015 *Deutsches Heer* publication, the objective is to have 10,000 deployable soldiers and be able to sustain up to 4,000 (about the size of a German brigade) indefinitely either together or as two "strengthened task forces."³⁰ The Germans also have committed themselves to having up to 1,000 soldiers available for emergency operations, such as hostage rescues, as well as providing substantial contributions to the European Union Battle Groups, the NATO Rapid Reaction Force (NRF), and now the NATO Very High Readiness Joint Task Force (VJTF). Published German documents, however, provide few details regarding the force generation cycle and which or how many units might be available within specific time frames. Generally, the Germans appear to equate rapid reaction capabilities with light airborne and airmobile infantry, more specifically the *Division Schnelle Kräfte* (DSK; Rapid

Forces Division). These are the troops that the German Army earmarks for early entry operations, noncombatant evacuation operations, and various tasks, such as irregular warfare and "deep" interdiction operations.³¹ The VJTF, however, is intended to be a medium-weight affair, and the Germans have signed on to provide mechanized infantry, which does not exist in the DSK. It would instead come out of one of Germany's two armored divisions, specifically the 1st Panzer Division, which, along with the DSK, is designated as part of the German Army's *Eingreifkräfte*, or reaction forces. The 1st Panzer Division has four brigades, one of which is a Dutch Army mechanized infantry brigade.

The Heer's small size reflects, above all, a desire to cut defense spending, but also a belief that the end of the Cold War meant that, from now on, Germany would be called upon primarily to pull its weight along with its NATO and European Union allies in overseas stability operations in such places as Africa and Afghanistan. Indeed, Germany played a significant role in Afghanistan, where it still maintains just under 1,000 troops, and, as of December 2015, there were roughly 3,100 German soldiers involved in a variety of overseas missions (including Afghanistan), and another 500 were slated for deployment to Mali.³²

The VJTF commitment, however, represents a reversal of course, one that reveals the Heer to be in difficult straits. In effect, what happened over the course of 2015 is that the German defense establishment made a priority of being able to counter Russia. It intends not only to contribute to the defense of NATO's eastern flank but also play a leadership role therein. In the words of Hans-Peter Bartels, the head of the Bundestag's defense committee, "through the crisis in the Ukraine, it once again has become clear for many that notwithstanding all of the 'out of area' operations, the fundamental task of the Bundeswehr remains defending the country and the Alliance."³³

The problem is that the Germans currently have little capacity to generate much of a force quickly, especially a medium- to heavy-weight force. On paper (or, to be more precise, on the *Deutsches Heer* website), Germany, which uses battalions as opposed to regiments, has about the same number of armored units as the British and the French. It currently has

- five armored battalions (three with 44 Leopard 2 main battle tanks each, plus one German/Dutch armored battalion with 48 Leopard 2s)

- 12 mechanized infantry battalions (ten with 44 Puma infantry fighting vehicles each plus two Dutch battalions with CV90 infantry fighting vehicles).³⁴

However, the Germans probably would need a week or more to mobilize a medium-weight battalion. Including heavier units and bringing the force up to a brigade would take longer. Moreover, according to one German defense analyst, at current equipment levels, Germany only has two battalions with the necessary modern equipment that would make them worthy of facing the Russians. The reason is that the Heer has reduced its equipment inventories so much and bought so few newer pieces to replace older equipment that it reportedly only has enough to provide its overseas deployments with up-to-date equipment, while the rest of the force lacks equipment for training and has only a portion of its major pieces of equipment in good operational condition. According to German military officials and the press, the Heer decided to make do with no more than 70 percent of its major equipment, meaning that it would have enough to provide for overseas deployments (by cobbling together gear from various units) at the price of not having adequate inventories for training or for major contingencies.³⁵ In a press interview in August 2015, Bartels described visiting a self-propelled howitzer unit that had only a few howitzers available for training, and, of the 24 artillery pieces officially in its inventory, only a “fraction” were in proper working condition.³⁶ In another interview, Bartels stated that the Heer’s experience trying to gather the equipment needed to participate in that summer’s Noble Jump NATO exercise indicated that it would struggle to meet its VJTF requirements.³⁷ Indeed, one German magazine commented that Noble Jump required a “massive” effort on the part of the Heer because of equipment shortages.³⁸ Similarly, it appears to be the case that, while Germany could muster a full brigade within 30 days, equipping it would almost certainly require stripping equipment from other units and other activities.

Bartels, the Ministry of Defense, and the Heer concluded that the Heer needed to restore its inventories to meet the stated goals of being able to support the VJTF along with its other commitments. “For a credible commitment to the collective defense of Europe,” Bartels stated, “we need the Bundeswehr to be fully equipped, which means at 100 percent.”³⁹ One step in that direction was the decision in April 2015 to return to service 100 recently decommissioned Leopard 2 tanks—explicitly in response to the Russian

threat—amid public criticism that Germany’s main battle tank fleet (currently about 225 Leopard 2s) had declined too much.⁴⁰ Similarly, in December 2015, Minister of Defense Ursula von der Leyen called for growing the military. She argued that the Bundeswehr simply lacked capacity, and also that recent history had demonstrated not only that there would continue to be crises requiring military responses but also that the nature of those crises would be unpredictable, meaning that the German military would have to be prepared for anything.⁴¹ At the very least, she insisted, the military needed more people.⁴² In May 2016, she announced a modest boost to the size of the military and declared that the time had come to begin to regrow the force.⁴³ Perhaps more importantly for the longer term, in July 2016 the German government released its new *Weissbuch* (White Book), which articulates real concern about the prospect of a conventional state-on-state conflict in Europe and a commitment to strengthening the military’s conventional capabilities. How much appetite the German Bundestag will have for significant funding increases, however, remains to be seen.

The problem, however, is that growing the military with respect to equipment and people is easier said than done. With regard to equipment, German defense officials acknowledge that the Army is far from its objective of *Vollausstattung* (being equipped at 100 percent) and is unlikely to meet it any time soon. The Deutsches Heer’s highest-ranking officer, Lieutenant General Jörg Vollmer, said in a November 2015 interview that it would never get to 100 percent, and the real objective is simply having “enough” to meet the Heer’s current commitments, which, thanks to Russia, are now understood to be significantly greater than before.⁴⁴ “The *Vollausstattung* of the Army is unrealistic,” Vollmer said.⁴⁵ Moreover, in many cases, the Heer will have to fill the gaps by retaining outdated equipment or even returning it to service.⁴⁶ For example, the Germans anticipate keeping the aging Marder infantry fighting vehicle (the mainstay of the German mechanized infantry) in service in large numbers for another eight to ten years, at which point they finally hope to have enough of the new Boxer vehicles to phase them out.⁴⁷ The Leopard 2s being brought back into service are an older model and require modernization. Similarly, increasing the number of Heer personnel represents a significant challenge: The Deutsches Heer has only just transitioned to an all-volunteer force and is struggling to compete in the marketplace for young recruits.⁴⁸ Growing the Heer ultimately requires spending large sums of money, and

it is far from certain that Germans today have a stomach for that kind of expenditure. Bartels, for example, rejects the NATO goal of spending 2 percent of gross domestic product as “unrealistic” and speaks instead of aiming for maybe 1.2 or 1.3 percent.⁴⁹ Polls indicate, however, that a significant portion of the German public is unconvinced that Russia represents a danger for Germany, which makes it hard for German leaders to embrace the idea of spending billions of euros in the name of VJTF and defending NATO’s eastern members.⁵⁰

Connected to the issue of equipping is the question of capabilities. As one German officer told us, a German armored division today is not what it was during the Cold War. He was specifically referring to the amount of organic support as well as the force’s expertise with respect to combined arms maneuver warfare, and his concern probably applies just as easily to the British and French militaries as well. He cited air defense, artillery, and bridging capabilities as examples of things that the Germans and others possessed, but quite possibly not in quantities that were sufficient for operating in the Baltics against the Russians. Similarly, contemporary armies—Germany’s army among them—tended to operate armor “like we did in the First World War,” meaning in support of infantry, as opposed to as a massed formation. The associated skills might not have been lost, but they might not be adequate either.

Ultimately, the Heer’s capacity to mobilize rapidly and sustain a heavy brigade indefinitely would depend on political will. While the Germans would struggle to respond quickly if the order were to come today, one can be more optimistic about their ability to sustain a force over the long term as they make necessary adjustments, provided, of course, that Germany’s leaders and the German people regard the mission as necessary.

Deutsches Heer Conclusions

- The Deutsches Heer most likely would require a week or more to mobilize an armored battalion; a full brigade probably would take a month.
- Because the Germans will have to strip other units of equipment to provide for an armored brigade, they will have a hard time fielding a larger force or engaging in other operations until equipment shortages are addressed.

OVERALL CONCLUSIONS

Based on our assessment, we reached the following conclusions regarding armored, tank-equipped forces, summarized in Table 1:

- The British Army can provide an armored battalion task force within 30 days and would need between 30 and 90 days to scale up to a full brigade. Britain should be able to sustain at least an armored brigade indefinitely.
- France probably can field one armored battalion task force within a week. Generating the equivalent of a full armored brigade probably would take several weeks to a month. However, the toll of France’s ongoing operations—especially *Opération Sentinelle*—on *Armée de Terre* readiness introduces a significant degree of uncertainty regarding France’s ability to sustain a brigade-sized force—and even the competence of that force, given *Sentinelle*’s effect on training. Current efforts to grow the *Armée de Terre* will help.
- The *Deutsches Heer* most likely would require a week or more to mobilize an armored battalion; a full brigade probably would take several weeks and possibly a month.

The clear implication of this study for American planners is that expectations for European contributions to defending the Baltic nations must be low. Beyond rushing initial units of light infantry into theater, perhaps to serve as a tripwire force (the three armies could probably generate light companies within a day), they would have a hard time generating armored forces quickly and subsequently sustaining their forces. A single armored brigade each appears to represent a maximum sustainable effort. There are also questions regarding their ability to operate at the level required for a conflict with the Russians, whether because of training cutbacks, neglected skills, or limited organic support capabilities. Moreover, although not discussed at length here, the faster British, French, and German forces needed to get to the Baltics, the more direct assistance they would need from the United States in the form of strategic airlift. The ability to move large formations quickly by rail via Germany must also be considered.

British plans to station up to 1,000 soldiers in Poland raise the question of prepositioning and whether the three militaries could shorten their mobilization timelines by placing troops or equipment sets forward in Eastern Europe. Prepositioning clearly would help, although none of the three

Table 1. Estimated Armored Force Generation Capabilities

Country	Within a Week	Within a Month	More Than a Month
Britain		1 task force	1 brigade
France	1 battalion	1 brigade	
Germany		1 brigade	

has the kind of inventories that would make it possible to keep large quantities of top-quality gear at a ready-but-idle state forward. They could follow Britain's lead by rotating battalions and even brigades through forward positions. For all three, however, such a measure would represent a major commitment, given the overall size of their forces: For Britain, it would be tantamount to reversing a decadelong commitment to withdraw its forces from the Continent and, in a sense, revert to a Cold War posture, albeit at a much smaller scale.

For France, a comparable move might require backing away from its current commitments to its homeland defense mission or its focus on its "southern flank"—i.e., the Sahel and the "arc of instability," which extends to Syria and the Persian Gulf. For Germany, the biggest challenge might be political and could hinge on the willingness of Germans to station troops in Eastern Europe and on the willingness of Eastern Europeans to host German troops.

NOTES

¹ F. Stephen Larrabee, Stuart E. Johnson, John Gordon IV, Peter A. Wilson, Caroline Baxter, Deborah Lai, and Calin Trenkov-Wermuth, *NATO and the Challenges of Austerity*, Santa Monica, Calif.: RAND Corporation, MG-1196-OSD, 2012; Michael Shurkin, *Setting Priorities in the Age of Austerity: British, French, and German Experiences*, Santa Monica, Calif.: RAND Corporation, RR-222-A, 2013.

² David A. Shlapak and Michael W. Johnson, *Reinforcing Deterrence on NATO's Eastern Flank: Wargaming the Defense of the Baltics*, Santa Monica, Calif.: RAND Corporation, RR-1253-A, 2016, p. 1.

³ Shlapak and Johnson, 2016, pp. 1–2.

⁴ For a good overview of recent trends in overall UK defense spending, see Paul Cornish, “United Kingdom Hard Power: Strategic Ambivalence,” in Gary J. Schmitt, ed., *A Hard Look at Hard Power: Assessing the Defense Capabilities of Key U.S. Allies and Security Partners*, Carlisle, Pa.: United States Army War College Press, 2015. Cornish does not, however, go into detail about British Army-specific budget reductions and reforms. See also Sam Jones, “Wave of Departures Leaves British Army Under Strength,” *Financial Times*, July 29, 2015.

⁵ HM Government, *Securing Britain in an Age of Uncertainty: The Strategic Defence and Security Review*, 2010.

⁶ HM Government, *National Security Strategy and Strategic Defence and Security Review 2015: A Secure and Prosperous United Kingdom*, 2015, p. 29.

⁷ IHS Jane's, “3rd (UK) Division Combined Arms Demonstration—Lead Armoured Task Force,” March 23, 2015; British Defence News, “UK Armoured Battle Group Takes Part in Poland Exercise Dragon 15,” April 13, 2015.

⁸ Gabriele Molinelli, “After the SDSR—Strike Brigades: A Big Deal?” *UK Armed Forces Commentary*, 2015a.

⁹ The British Army is considering a variety of options including buying the French *véhicule blindé de combat de l'infanterie* (VBCI), which it has tested extensively. See, for example, Andrew Chuter, “UK Returns Sights to 8x8 Armored Vehicle,” *DefenseNews*, 2015.

¹⁰ For more on the Harmony Guidelines, see King's College London, “Protecting the Wellbeing of UK Armed Forces,” undated.

¹¹ Gabriele Molinelli, “Bits and Pieces—Update,” *UK Armed Forces Commentary*, 2016.

¹² For a critical view of the British Army's force levels and planned integration between active and reserve components, see Gabriele Molinelli, “SDSR 2015—Issues, Analysis and Recommendations Going Towards the Review,” *UK Armed Forces Commentary*, 2015b; Gabriele Molinelli, “Light Role Infantry Battalions and Regular—Reserve Integration,” *UK Armed Forces Commentary*, August 8, 2014.

¹³ Some sources put the number mobilized for Opération Sentinelle at 10,500 or more; it is possible that the sources simply count different things. Moreover, generally speaking, the numbers published by the French government regarding how many *militaires* are involved in any operation do not distinguish between Army personnel and members of France's other services. One can assume that ground operations, such as Sangaris, are predominantly Army affairs, while Chammal (the operation against the Islamic State) is primarily a Navy and Air Force operation.

¹⁴ The French Ministry of Defense website provides relatively up-to-date information on Barkhane and Sangaris. See French Ministry of Defense, “Opération Barkhane,” August 11, 2016, and French Ministry of Defense, “Operation Sangaris,” December 10, 2013.

¹⁵ *Livre blanc sur la défense et la sécurité nationale*, Paris: Direction de l'information légale et administrative, 2013, p. 91.

¹⁶ Nathalie Guibert, “L'armée de terre devient le premier recruteur de France,” *Le Monde*, May 19, 2015.

¹⁷ For an overview, see Défense Globale, “Allez au contact de la nouvelle organisation de l'armée de terre en 2016 (carte),” *La Voix du Nord*, 2015. For more on the organization of a French tank regiment, see Juliette Deroo, “Réalités d'un régiment de chars en 2013: l'Ifri au 501e RCC,” *Ultima Ratio*, 2013. France has roughly 250 main battle tanks, of which, in 2015, roughly 75 percent were available at any one time, according to data submitted by the Ministry of Defense to the French National Assembly. See Nosdeputes.fr, “François Cornut-Gentille: Question No. 72349 au Ministère de la défense,” 2015.

¹⁸ Laurent Lagneau, “Sentinelle oblige, le dispositif de préparation opérationnelle de l'armée de Terre va Évoluer,” *Opex360.com*, 2015b; Laurent Lagneau, “La préparation opérationnelle des forces n'est ‘pas négociable,’ prévient le général de Villiers,” *Opex360.com*, 2015a.

¹⁹ Lagneau, 2015b.

²⁰ Lagneau, 2015b.

²¹ Laurent Lagneau, “Sentinelle: Des soldats obligés de s'insrire à un club de sport pour prendre une douche,” *Opex360.com*, 2016.

²² La Commission de la Défense Nationale et des Forces Armées, *Rapport D'Information*, Paris: Assemblée Nationale, December 9, 2015, p. 31.

²³ La Commission de la Défense Nationale et des Forces Armées, 2015, p. 31. The same report includes a list of mechanical problems associated with specific vehicles in specific operational theaters in 2014 (pp. 38–39).

²⁴ La Commission de la Défense Nationale et des Forces Armées, 2015, p. 31.

²⁵ La Commission de la Défense Nationale et des Forces Armées, 2015, p. 37.

²⁶ La Commission de la Défense Nationale et des Forces Armées, 2015, p. 43.

²⁷ La Commission de la Défense Nationale et des Forces Armées, 2015, p. 65.

²⁸ In July 2016, the German government published a new *Weissbuch* (White Paper) outlining German defense policy. The paper makes clear that the Germans can no longer take European security for granted, and it also expresses both regret for the decline of German military power and the intent to restore some of it, although it does not provide details. See *Weissbuch 2016: Zur Sicherheitspolitik und zur Zukunft der Bundeswehr*, Berlin: Bundesministerium der Verteidigung, 2016.

²⁹ The German military publishes personnel numbers on its website and updates the numbers almost monthly. See Bundeswehr, “Stärke: Militärisches Personal der Bundeswehr,” March 23, 2016b.

³⁰ Deutsche Heer, *Die Neuausrichtung des Heeres: Kämpfen—Schützen—Helfen—Vermitteln*, 2015, pp. 10–11.

³¹ Deutsches Heer, “Division Schnelle Kräfte,” January 7, 2016.

³² *Die Welt*, “Was Sie zum Bundeswehr-Einsatz wissen sollten,” December 4, 2015b. According to this source, there are fewer than 1,000 German soldiers in Afghanistan.

³³ Christoph Hickmann, “Vom Panzer bis zum Poncho,” *Sueddeutsche Zeitung*, August 12, 2015b.

³⁴ Bundeswehr, “Heer,” February 3, 2016a.

³⁵ Helmut Michelis, “Interview mit Jörg Vollmer: ‘Eine Vollausrüstung des Heeres ist unrealistisch,’” *RP Online*, November 11, 2015; Stefanie Bolzen and Thorsten Jungholt, “Leitung der Speerspitze ist Kraftakt für Deutschland,” *Die Welt*, 2015; “Hans-Peter Bartels: Die Bundeswehr hat ein Ausstattungs-Problem,” *SHZ*, August 1, 2015.

³⁶ Hickmann, 2015b.

³⁷ “Hans-Peter Bartels: Die Bundeswehr hat ein Ausstattungs-Problem,” 2015.

³⁸ Bolzen and Jungholt, 2015.

³⁹ “Hans-Peter Bartels: Die Bundeswehr hat ein Ausstattungs-Problem,” 2015.

⁴⁰ “Bundeswehr Kauft 100 Ausrangierte Kampfpanzer zurück,” April 10, 2015; Christoph Hickmann, “Mehr Panzer für mehr Beruhigung,” *Süddeutsche Zeitung*, February 27, 2015a; “Folge der Russland-Krise? Bundeswehr will mehr ‘Leopard 2’-Panzer einsatzbereit haben,” *Kölner Stadt-Anzeiger*, April 10, 2015. At the time, there appears to have been some confusion over the precise number of Leopard 2s in the Deutsches Heer inventory and, of those, how many were in operable condition. It appears to have been the case that the Heer itself did not know precisely. See Thomas Wiegold, “Panzer zählen? Bitte keine Zahlenspielerien,” *Augen Geradeaus!* 2015a.

⁴¹ Thomas Wiegold, “Von der Leyen eröffnet Debatte über eine größere Bundeswehr,” *Augen Geradeaus!* 2015b.

⁴² *Die Welt*, “Mit 179.000 Soldaten kommt Deutschland nicht weit,” December 3, 2015a.

⁴³ Anton Troianovski, “Germany Plans Modest Boost in Size of Its Armed Forces: Defense Minister Ursula von der Leyen Cites Russian Militarism, Fight Against Terrorism and Dealing with Migrant Crisis,” *Wall Street Journal*, May 10, 2016.

⁴⁴ Michelis, 2015.

⁴⁵ Michelis, 2015.

⁴⁶ Hickmann, 2015b.

⁴⁷ Michelis, 2015.

⁴⁸ “Hans-Peter Bartels: Die Bundeswehr hat ein Ausstattungs-Problem,” 2015.

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About This Report

This study, based on research conducted in 2016 and information valid at that time, updates previous RAND studies published in 2012 and 2013 that outlined cuts and reforms then being made to the British, French, and German armies. In light of the conflict in the Ukraine and the revived possibility of a conventional military conflict in Europe with a peer adversary (Russia), we look specifically at the British, French, and German armies' abilities to generate a heavy armored brigade each for a hypothetical open-ended mission to the Baltics to deter Russian aggression.

This report should be of interest to policymakers and force planners interested in the conventional military capabilities of our Western allies, as well as potential counters to Russian aggression in Eastern Europe. It builds on previous work (F. Stephen Larrabee, Stuart E. Johnson, John Gordon IV, Peter A. Wilson, Caroline Baxter, Deborah Lai, and Calin Trenkov-Wermuth, *NATO and the Challenges of Austerity*, Santa Monica, Calif.: RAND Corporation, MG-1196-OSD, 2012, and Michael Shurkin, *Setting Priorities in the Age of Austerity: British, French, and German Experiences*, Santa Monica, Calif.: RAND Corporation, RR-222-A, 2013) by assessing what now remains of the three militaries' capacity to generate armored forces capable of high-end conventional warfare after years of austerity measures.

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