# Deterring Russian Aggression in the Baltic States

## What It Takes to Win

# Addendum

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*Deterring Russian Aggression in the Baltic States: What It Takes to Win*

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The RAND Corporation[2]

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Subcommittee on Tactical Air and Land Forces
United States House of Representatives

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***Questions for the record from James Langevin to Timothy Bonds and David Shlapak (combined answers)***

**Question One:** These war-gaming projections indicate the North Atlantic Treaty Organization's (NATO's) current structure would fail to repel a Russian force invasion of its bordering Baltic neighbors. I greatly appreciate the various recommendations that were made as a result of this war-gaming, and I would like to hear your thoughts on how we can best supplement any immediate gaps in force structure with advanced technologies, such as unmanned aerial vehicles (UAVs), electronic warfare, or cyber tactics, for example. Do you see viable opportunities there to tip the balance in our favor?

   **Bottom Line Answer**: Advanced technologies, such as UAVs, electronic warfare, and cyber tactics, cannot by themselves "tip the balance in our favor" or serve as a substitute for capable ground forces to prevent a rapid Russian *fait accompli* in the Baltics. But Army modernization is necessary to counter Russian advantages in air defense, long-range fires, attack aviation, antitank munitions, and cyber-electromagnetic capabilities, so that ground forces can successfully fight outnumbered and win with reduced casualties.
   There is not enough time and space for stand-off strikes in support of a limited ground force to succeed in preventing a rapid *fait accompli*. It is only 135 miles from Pskov to Riga. Moving tactically at 5 miles per hour, the Russians can still overrun Baltic defense forces and isolate their capitals in less than 60 hours. Russian air defenses and fighters, available bases, realistic sortie rates, and legacy munitions reduce the effectiveness of NATO airpower in the opening weeks of a conflict.

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Third offset technologies will likely not solve this fundamental time-distance problem, although some could enable a joint force to execute a more realistic "multidomain battle" concept. The Army modernization priorities necessary to close critical capability gaps, retain freedom of action in contested environments, and succeed in close combat include:

1. **fires:** improve target acquisition sensors and the range, volume, and area effects of Army fires to destroy mobile radars, missile launchers, armored forces, and command posts
2. **protection:** improve mobile, light-armored short-range air defense to defeat enemy fighters, attack helicopters, and unmanned aerial systems so ground forces can move to and win the close fight
3. **maneuver:** improve M1/M2 armored protection, aircraft survivability (radar surface-to-air warning), and lethality (extended-range Hellfire), as well as dismounted firepower (better, faster Javelin) to destroy enemy forces in close combat
4. **command:** improve C4ISR system integration, resilience, and interoperability with allies; assured precision navigation and timing; and offensive and defensive cyber-electromagnetic warfare capabilities to exercise effective mission command
5. **mobility:** improve the weight capability of armored vehicle-launched bridges to support a rapid counterattack in Baltic terrain with multiple rivers.

**Question Two:** It is no secret that over the past decade, the Russian government has conducted increasingly frequent and egregious cyberattacks against NATO countries. As such, cyber defense has become an integral part of NATO's fundamental mission of collective defense. Do you believe NATO is at a maturity level to effectively incorporate cyber technologies into strategies or doctrine to exploit Russian critical infrastructure? And how can we better leverage U.S. resources to broaden NATO cybersecurity capacity, take preventative measures, and enhance information sharing?

**Bottom Line Answer**: Though RAND has extensive analytic capability in cyberwarfare, RAND has not yet been asked to assess NATO's ability to effectively incorporate cyber technologies into strategies or doctrine to exploit Russian critical infrastructure. However, we can offer some broad observations.

Progress on cybersecurity, as articulated in NATO's Cyber Defence Policy, includes the following.

- At the 2016 NATO Summit in Warsaw, the allies "recognized cyberspace as an operational domain in which NATO must defend itself as effectively as it does in the air, on land and at sea."
- The allies made a "Cyber Defence Pledge" to prioritize their cyber defense capabilties and protect their national networks.
- The allies committed to mutual assistance in preventing, mitigating, and recovering from cyber attacks and conducting cyber education, training, and exercises.

However, significant challenges remain before NATO has an effective offensive cyber capability.

- Some NATO member states are developing their own offensive cyber capabilities, but these remain national capabilities under national control.
- It is unclear how and under what circumstances member states would choose to make their cyber capabilities available to the NATO alliance and NATO commands.

The U.S. is positioned to lead NATO to achieve cyber goals.

- NATO should develop the ability to plan, coordinate, command, and control the offensive cyber capabilities of member states. This is still nascent within NATO.

Given that NATO planning, as well as command and control mechanisms, generally mirror those developed by the United States, we expect that Department of Defense (DoD) mechanisms will serve as a template for NATO.

***Questions for the record from Jacky Rosen to Timothy Bonds and David Shlapak (combined answers)***

**Question One:** This war game was designed to help assess the viability of NATO's current posture, and in turn U.S. conventional military posture in Europe. How has U.S. military posture in Europe improved since the release of RAND's war game report? In your opinion, are we doing enough to maintain a credible deterrence posture?

   **Bottom Line Answer**: The increase in the U.S. European Reassurance Initiative and the matching contributions by NATO allies are important first steps that signal alliance cohesion and commitment to the Baltic states. Yet they remain insufficient to prevent a rapid Russian *fait accompli*, which arguably should be the standard for credible deterrence given the enormous costs and risks of miscalculation, war, and escalation with Russia.

   The increase in the U.S. European Reassurance Initiative provided for one rotational armored brigade, which is being spread across Eastern Europe from the Baltics to Bulgaria. There are U.S. plans to establish a prepositioned equipment set for a second armored brigade, although it would not be possible to draw equipment and fight on seven to ten days' warning. The Europeans are providing three battalion-size battlegroups in each of the Baltic States led by Britain, Canada, and Germany. RAND war games have shown these forces remain insufficient to prevent a rapid Russian *fait accompli* if deterrence fails.

   The problem with relying on a tripwire is that Putin may doubt NATO's will to follow through with a delayed counteroffensive to liberate the Baltic states. A counteroffensive would be expensive, requiring six months to generate nine times more force to attack at a 3:1 ratio than to defend at a 1:3 ratio. NATO would likely suffer more casualties in the first week of combat with Russia than during the last decade in Afghanistan and Iraq. Russia could retaliate by striking critical infrastructure in Western Europe and the United States with conventional cruise missiles. Moscow would also likely threaten and possibly demonstrate use of nuclear weapons to deter a NATO counteroffensive. Would Western policymakers really be willing to risk their capitals for Tallinn, Riga, and Vilnius? Putin may believe he can engage in brinksmanship to shift NATO's response to economic sanctions.

To avoid a rapid defeat, RAND war games suggest the U.S. should station a corps headquarters and a full modular armored division with three armored brigades and supporting enablers in Europe to defend the Baltics on short warning. Reducing the Russian advantage in tanks to 2.4:1, this force, along with the three NATO battlegroups, three infantry brigades, and one Stryker brigade, could hold the Baltic capitals for two to four weeks with prepositioned stocks of fuel and ammunition. Another nine to 12 NATO armored brigades would need to counterattack rapidly to establish a sustainable defense. These forces largely exist; they are just not ready, not in the right place, and lack infrastructure to move quickly.

**Question Two:** What specific Russian capabilities, which have been demonstrated to date, pose the highest risk to U.S. ground forces? In your opinion, what modernization capability gaps do we need to focus on in the near term to help mitigate these capabilities and/or threats?

   **Bottom Line Answer**: The most lethal Russian capabilities that pose direct risk to U.S. ground forces include BM-30 and BM-21 rocket artillery; T-14, T-90, and T-72B3 tanks; AT-14 antitank guided missiles (ATGMs); Su-34 and Su-25 attack aircraft; Hind attack helicopters; Iskander missiles; and cyber-electromagnetic warfare capabilities. Additionally, Russian SA-21, SA-15, and SA-22 air defense systems and fighter aircraft present indirect risk by limiting the defensive counterair, air interdiction, and close air support for ground forces provided by NATO airpower. Army modernization should address critical capability to suppress Russian air defenses, counter long-range fires, defend against low-altitude attacks by aircraft and attack helicopters, survive ATGMs, conduct cyber-electromagnetic warfare, maintain interoperable command systems with NATO allies, and bridge rivers with heavy armor.
   Russia has steadily modernized its forces to negate U.S. airpower and dominate its neighbors. Russia has developed a two-tier air defense system with a stand-off advantage that presents a lethal threat to NATO's fourth-generation aircraft. Assuming a 33-percent readiness rate in the Western Military District, Russia could still generate 27 battalion tactical groups or nine brigade equivalents with seven days' warning, achieving a 6:1 advantage in modern main battle tanks versus NATO's current posture in RAND war games. At a 66-percent readiness rate, Russia could generate up to 60 battalions or 20 brigade equivalents with ten days' warning, achieving a 4.5:1 advantage in tanks versus NATO's enhanced forward presence. NATO's artillery would be outnumbered, outranged, and outgunned by Russian artillery. Emerging insights from RAND's analysis of Army capability gaps and modernization priorities observe that Russia's ATGMs can destroy M1A2 tanks, while the active protection system on Russian armor can defeat Javelin antitank munitions. Russia could surge close air support and attack helicopters in low-altitude attacks to destroy U.S. armor, which lack short-range air defense. Russia's cyber and electronic warfare attacks present new challenges with potentially crippling effects. Collectively, this is a prime example of losing "overmatch."
   In contrast, the United States has not sized, postured, modernized, and resourced the armed forces to deter Russia since 1992. In particular, the DoD has for 25 years built the Army to defeat third-world powers and insurgents, not a peer competitor. Army modernization programs have been repeatedly cancelled and cut during this time. Fixing forward posture is a necessary but not

sufficient condition to prevent a rapid *fait accompli*. Army modernization is necessary to close the critical capability gaps outlined above in order to succeed in decisive close combat.

*Question for the record from Jacky Rosen to Timothy Bonds*

**Question One:** Rotating forces over time seems to be a costly undertaking. After how many nine-month armored brigade combat team (ABCT) rotations does it become more cost effective to permanently base an ABCT in Europe?

**Bottom Line Answer**: RAND has the analytic capability but has not yet been asked to complete a detailed cost analysis of the range of possibilities about how and where units would be based, operated, and supported under permanent stationing or rotational presence over time. Nor has RAND completed an analysis of different posture locations, methods, and force levels to determine their respective strategic and operational advantages, disadvantages, costs, and risks.
However, we offer the following operational and force sufficiency considerations.

- Rotating an armored brigade with its equipment to Europe provides the most ready unit forward and improves power projection skills in Europe.
- However, it requires all nine current armored brigades in the active component to meet three rotational requirements for deterrence in Europe, Korea, and Kuwait at a 1:2 ratio.
- The Army currently does not have enough capacity to maintain three rotational armored brigades in Europe to deter Russia while meeting its other two requirements in Korea and Kuwait.
- Even accounting for the two additional armored brigades that the Army plans to build plus the five armored brigades in the National Guard, the Army will not have enough capacity to maintain five rotational requirements.
- Given the enormous costs of miscalculation, war, and escalation with Russia, the Army, DoD, and Congress should consider growing three new armored brigades and stationing them in Europe to provide a minimum credible deterrent, reduce rotational turbulence, and sustain unit readiness in the United States.

We also offer the following considerations on different types of costs.

- Some recurring costs are higher for permanently stationing forces overseas, including housing, dependent education, and cost of living adjustments.
- Other categories of recurring costs can be higher for rotating forces to meet overseas missions, such as transportation costs for unit deployment and return.
- Some categories of recurring costs are challenging to estimate without a detailed understanding of where and how units will be stationed, operated, and supported.
- In addition to recurring costs, there may also be one-time costs for either permanent stationing (e.g., military construction) or rotation (e.g., equipment sets).
- Host nation support may offset some or all of the additional costs discussed here, such as soldier/unit support, base operations, and military construction.