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*Capability and Credibility Challenges for U.S. Extended Nuclear Deterrence*

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A Report of the CSIS Project on Nuclear Issues

**CSIS** | CENTER FOR STRATEGIC &  
INTERNATIONAL STUDIES



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# Acknowledgments

This report is made possible by generous support from the Defense Threat Reduction Agency.

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# Introduction

Within the next 10 years, U.S. extended deterrence could look notably different than it does today.<sup>1</sup> In a new era of strategic competition, the twenty-first-century threat environment is changing in ways that the United States cannot readily manage or control. Nuclear threats are rising, and U.S. allies are increasingly concerned about the credibility of U.S. security guarantees. Russia is issuing veiled threats to use nuclear weapons in Ukraine, China is drastically increasing the size and diversity of its nuclear arsenal, North Korea is fielding more advanced nuclear weapons capabilities, and Iran is developing a high degree of nuclear latency.

To explore these issues, the Center for Strategic and International Studies (CSIS) Project on Nuclear Issues (PONI) leveraged an “alternative futures” methodology to unpack how key drivers might affect the U.S. extended deterrence mission in the next 10 years. In nearly all future scenarios this project explored, the United States suffers a credibility problem. It will be increasingly difficult to assure allies that the United States is prepared to employ U.S. nuclear weapons in defending their vital interests if necessary. It will require a shift in the way future administrations consult, plan, train, and operate with allies. The failure to adapt could lead to U.S. allies pursuing their own nuclear weapons or to the inability to deter adversaries, which could ultimately lead to uncontrolled escalation and the use of nuclear weapons in a conflict—a future the United States and its allies have worked to avoid for more than 75 years. Another extreme potential risk is the breakdown of alliances in both Europe and Asia, which is a goal Moscow and Beijing share.

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*In nearly all future scenarios this project explored, the United States suffers a credibility problem.*

In any nuclear future, the United States' best asset will be its allies—if it is able to maintain alliance cohesion. Allies are a center of gravity for the United States, as well as a force multiplier. The research scenarios consider changes in adversary capabilities, but in all scenarios, a cohesive and confident alliance network backed by credible extended deterrence guarantees U.S. strategic interests. Since a strong alliance network is the best weapon against Russian and Chinese aggression and risk manipulation, this report's recommendations focus on strengthening alliance cohesion through a combination of sustained investment in the nuclear enterprise, developing capabilities to manage nuclear risks, improving communication and consultation with allies, and strengthening the United States' overall credibility as a strategic partner.

# Findings Summary

This project set out to answer three main questions: (1) What are the strategic drivers that will shape the U.S. extended deterrence mission over the next 10 years, and how might those drivers interact to produce different outcomes, or “futures”? (2) How will U.S. concepts of integrated deterrence shape the extended deterrence mission and how might weighting various integrated deterrence objectives differently affect key elements of U.S. extended deterrence (e.g., treaty commitments, nuclear policy, forward-deployed nuclear forces, nuclear sharing and consultation arrangements, allied conventional capabilities, U.S. forces deployed abroad, and nonproliferation)? (3) What are the signposts and indicators that one of these potential futures may be more likely?

**Drivers:** The study found that adversary nuclear capabilities and alliance cohesion would be the main strategic driver of the U.S. extended deterrence mission for the next decade. Adversary nuclear capabilities will be impacted by a variety of factors, including advances in nonnuclear technologies, regional ambitions, and internal factors such as economic constraints. One important variable will be whether and to what extent adversaries collude with each other. Alliance cohesion and synchronization will be another key strategic driver and will be influenced by external threat perceptions, internal political pressures, the credibility of U.S. security guarantees, and allies’ interpretation of the concept of integrated deterrence, among other factors. This report defines “synchronization challenges” among allies as a combination of political and operational factors, such as competition among allies for U.S. assurances and capabilities, a lack of interoperability at the technical level, and the overarching absence of shared strategic interests.

There is a risk that allies perceive integrated deterrence as putting them in competition for U.S. attention and resources, or that integrated deterrence somehow signals a move away from “nuclear” deterrence. Additionally, the study found allies’ perceptions of U.S. domestic politics will influence alliance cohesion



and U.S. credibility. Continued U.S. polarization, a lack of sustained investment in the nuclear enterprise, or fluctuations in attitudes toward the allies could undermine U.S. extended deterrence efforts.

**Integrated Deterrence:** Concepts of integrated deterrence will have at least three important implications for extended deterrence. First, based on all of the project scenarios, the United States will need to continue



*The submarine USS Annapolis (front), U.S. nuclear-powered aircraft carrier Ronald Reagan (center), and South Korean and Japanese warships seen during a combined trilateral anti-submarine exercise on September 30, 2022, in East Sea, South Korea.*

Photo: South Korean Defense Ministry via Getty Images.

take a more holistic approach to assuring allies in both Europe and Asia to prevent them from competing with each other for U.S. guarantees and resources. In general, the study found that the United States could improve its messaging to allies, particularly through a more robust consultation process. Finally, the study found that arms control and nonproliferation efforts are possible in all the alternative future scenarios; however, these agreements will look very different depending on adversary capabilities and alliance cohesion.

**Signposts:** The study identified a variety of signposts for each scenario. These include adversaries' investments in nuclear and nonnuclear capabilities, allies' requests for U.S. assets or assurances, allied and adversarial interest in arms control and risk reduction measures, and political shifts within allies' governments. The relationship between adversaries may also signal a shifting strategic landscape, depending on whether they are working in loose coordination or a more formal cooperation. One of the most prominent signposts will be U.S. investment in the nuclear enterprise and political commitment to alliances. These signals from Washington will heavily influence the extended deterrence mission, adversaries' willingness to engage in nuclear adventurism and manipulate strategic risks, and allies' confidence in U.S. security guarantees and willingness to cooperate—rather than compete—with each other.

The study resulted in three overarching findings and recommendations for U.S. decisionmakers:

to rely on nuclear weapons for extended deterrence purposes, but it will also need to keep open the possibility of shifting investment to advanced nonnuclear capabilities and competing with Russia and China in different domains. This will require a more flexible, agile, and responsive defense investment process than currently exists. Second, the United States will need to

- First, in order to compete in the nuclear future, the United States must sustain investment in the nuclear enterprise while also competing in nonnuclear technologies. This will require a more flexible, agile, and responsive defense investment process than currently exists.
- Second, alliance cohesion will be increasingly difficult in all nuclear futures but is essential for a successful extended deterrence mission.
- Third, the United States can strengthen alliance cohesion not only through sustained investment in nuclear capabilities, but also by committing publicly and repeatedly to the enduring value of alliances, tailoring messages to its allies, and revamping consultation and operational planning processes with allies.

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*In order to compete in the nuclear future, the United States must sustain investment in the nuclear enterprise while also competing in nonnuclear technologies. This will require a more flexible, agile, and responsive defense investment process than currently exists.*

# Methodology

To understand future U.S. extended deterrence requirements, PONI leveraged an alternative futures methodology for this project. Over the course of three workshops, PONI convened a diverse group of regional and functional experts to identify key trends and drivers that will shape the U.S. extended deterrence mission and to develop and evaluate four future scenarios that highlight outcomes, risks, and opportunities for U.S. policymakers.

In the first workshop, senior experts identified 11 key trends that will shape the future of the U.S. extended deterrence mission. The project team categorized these trends based on the “three Cs” of deterrence: capability, credibility, and communication—though some of the factors overlap between categories or do not neatly fit into one bucket. These trends are listed below:

## **CAPABILITY**

1. Growth and diversification of nuclear arsenals, both qualitatively and quantitatively
2. Increased range and accuracy of adversary weapons systems, including nonnuclear capabilities, which threaten U.S. and allied assets
3. Expanded competition—and in some cases conflict—across multiple domains, including space and cyber
4. Increased transparency through social media platforms and open-source data, magnifying the ability to cause social disruption and spread misinformation and disinformation

## CREDIBILITY

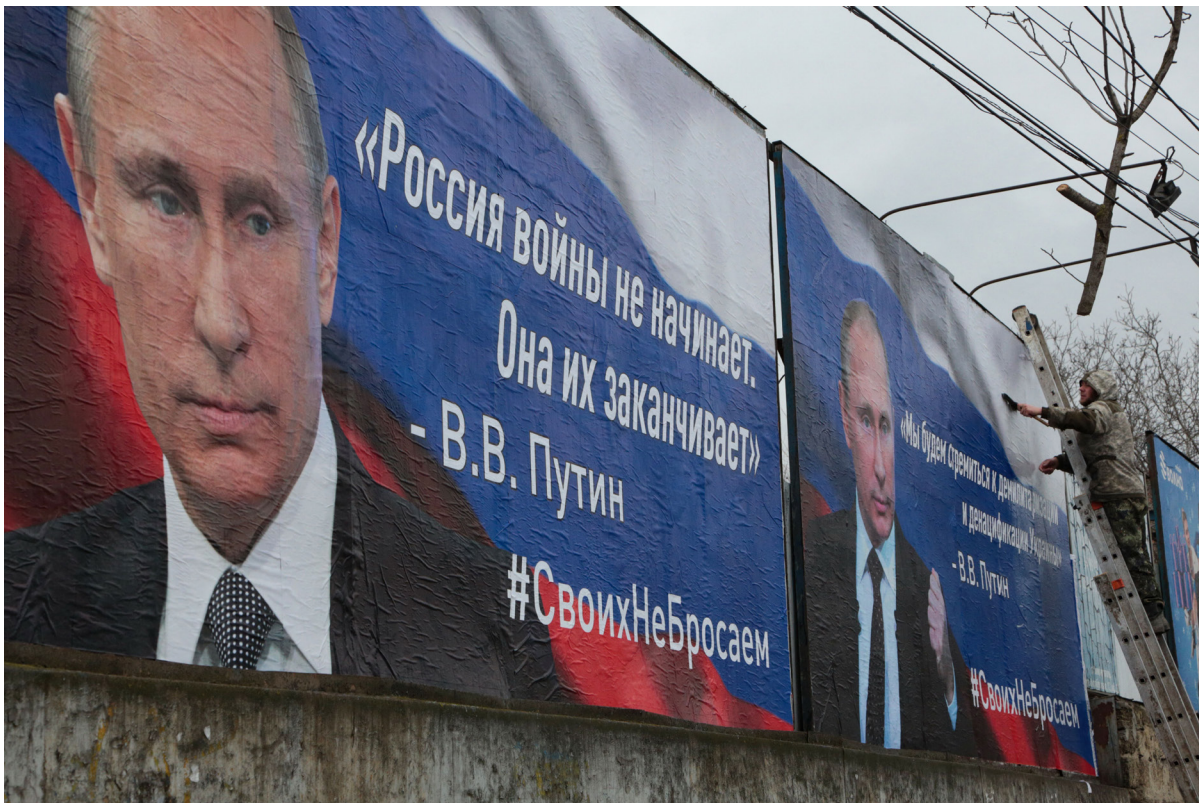
5. Synchronization and credibility challenges that cause logistical and political stress on alliance networks
6. Increased signaling and demand by allies and partners for U.S. capabilities and exports, including weapons sales, which stress U.S. weapons production infrastructure and political support for weapons production
7. Increased demand by allies and partners for forward-deployed U.S. strategic assets in a tense geopolitical environment of competition and heightened rhetoric

## COMMUNICATION

8. Confused and blurred messaging due to nonstop, multivariate communications from both allies and adversaries through multiple private and public channels
9. Increased nuclear threats and blackmail from adversaries, including during times of crisis

## OTHER

10. Increased economic coercion though political demands and widening global interconnectivity
11. Increased number and influence of autocratic regimes around the world, some of which are strongly supported by domestic populist movements



*A man finishes gluing huge placards bearing images of Russian president Vladimir Putin that read "Russia does not start wars, it ends them" (L) and "We will aim for the demilitarization and denazification of Ukraine" (R) in the city center of Simferopol, Crimea, on March 4, 2022.*

Photo by STRINGER/AFP via Getty Images



Participants were asked to vote on the trends and drivers that will have the greatest effect on the future extended deterrence mission. This allowed PONI to cluster the key trends and develop a consensus on which drivers are likely to be the most significant over the next 10 years. The three most significant trends were the following:

- Growth and diversification of nuclear arsenals
- Synchronization challenges given multipolar nuclear threats stressing alliance networks
- Confused and blurred messaging due to nonstop, multivariate communications

The PONI team then used the results of the first workshop and the top two drivers (growing arsenals and synchronization challenges) to develop four alternative future scenarios. PONI defined the first factor as adversaries expanding their nuclear arsenals quantitatively and qualitatively, to include means of delivery, such as hypersonic glide vehicles or dual-capable systems. With these alternative future scenarios, this research sought to illuminate how key drivers might shape future extended deterrence dynamics and requirements.

Table 1 captures the four scenarios derived from changes in adversary capabilities and alliance cohesion: (1) opportunistic competition, (2) bloc competition, (3) shifting nonnuclear competition, and (4) competition and cooperation.

**Table 1: Alternative Nuclear Future Scenarios**

	Low Alliance Cohesion	High Alliance Cohesion
High Adversary Nuclear Capabilities	Scenario 1: opportunistic competition	Scenario 2: bloc competition
Low Adversary Nuclear Capabilities	Scenario 3: shifting nonnuclear competition	Scenario 4: competition and cooperation

The PONI team then generated stories that describe these futures and how they could plausibly unfold.

The second and third workshops focused on evaluating these future scenarios and their implications, potential benefits and challenges, and risks. In particular, the workshops focused on the implications of these scenarios for (1) core aspects of the U.S. nuclear mission (i.e., how nuclear capabilities play into integrated deterrence concepts, deterrence, extended deterrence, and assurance); (2) stability and escalation risks; (3) arms control and nonproliferation; and (4) broad and enduring U.S. strategic objectives, including those related to strategic competition.

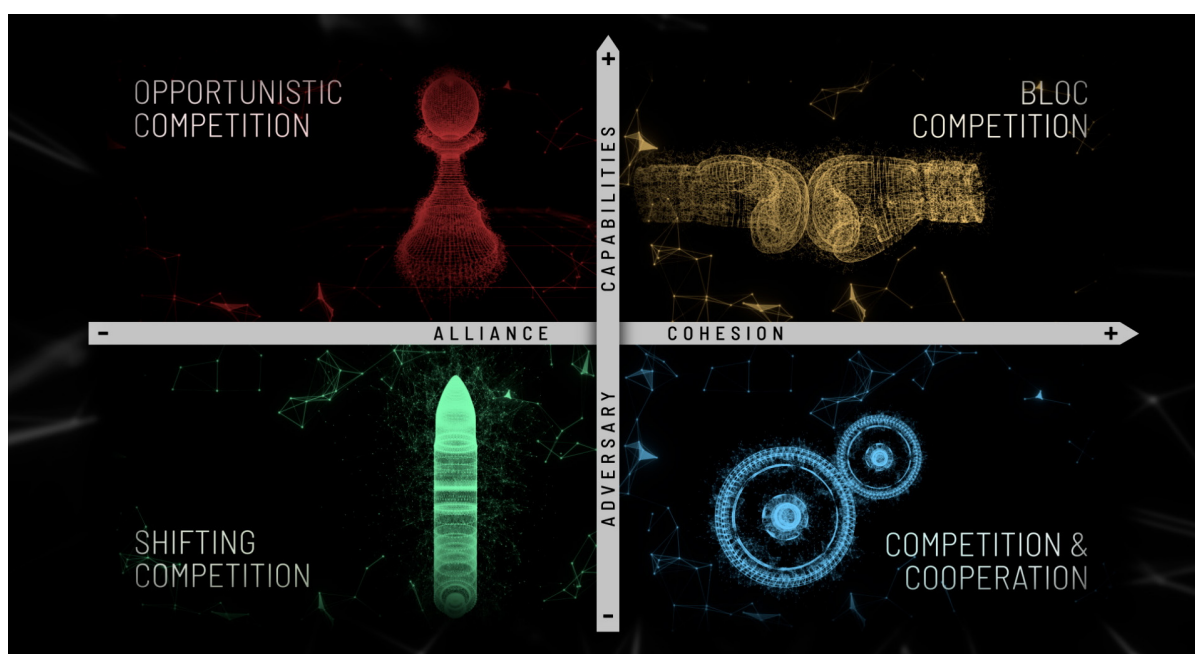
The scenarios assume that in 2032, Vladimir Putin and Xi Jinping remain in power in Russia and China respectively and that they continue to pursue regional ambitions and challenge the U.S.-led alliance-based international order. Both leaders are under increasing pressure to demonstrate progress in achieving their strategic aims. Putin strives to solidify his legacy and return Russia to an era of greatness following the war in Ukraine, and Xi is under pressure to deliver on promises of Chinese greatness as the People’s Republic approaches its 100th anniversary. Among allies, the scenarios assume that the North Atlantic Treaty Organization (NATO) still exists, as do alliances in the Indo-Pacific, and that there are no new nuclear actors in 2032. The scenarios assume the Non-Proliferation Treaty (NPT) is still in force and that there has not been an extension or replacement of New START.<sup>2</sup> Finally, the scenarios assume that the United States is following through on its current nuclear modernization plans and the program of record and is nearing completion of the modernization of the triad. As a final caveat, this analysis focuses on nuclear expansion by Russia and

China and does not explicitly address North Korea or nuclear actors in the Middle East or South Asia. This was primarily because Russia and China were the focus of expert interviews and workshops; however, the authors acknowledge that actors outside Europe and Asia will impact the U.S. extended deterrence mission and these are explored in the “wild card” scenarios.



# Analysis

The four alternative futures identify specific challenges for future and current U.S. extended deterrence requirements. They also identify signposts to indicate which scenario the United States might be moving toward, along with recommendations for how to navigate (or avoid) that pathway. The four scenarios below range from a “worst-case scenario” to a relatively stable competition.



Source: CSIS iDeas Lab.

## Scenario 1: Opportunistic Competition

**Opportunistic competition is a scenario of high adversary capabilities and low alliance cohesion. In this future, China and Russia are expanding their nuclear arsenals quantitatively and qualitatively, and the United States struggles to maintain robust alliances.**

In the CSIS PONI workshops, one participant pointed out, “From the allies’ perspective, this is the world we are currently living in.” Although this is the worst-case scenario, it is also the most likely based on current trends among adversaries and allies—though this may depend on the outcome of the war in Ukraine.

In this future, China’s nuclear arsenal stands at approximately 1,000 nuclear weapons and includes a functional nuclear triad.<sup>3</sup> China’s modernization efforts leverage artificial intelligence, quantum computing, and the use of small satellites for both civilian and military purposes. Following the war in Ukraine, Russia determines its nuclear arsenal and nuclear coercion gives it a strategic advantage and increases its reliance on nuclear weapons. It focuses its modernization and expansion on new and advanced dual-capable intermediate-range missiles. It also develops new conventional systems to replace those lost in the war in Ukraine, predominantly drones and small satellites to improve its intelligence, surveillance, and reconnaissance (ISR) capabilities. China increasingly coordinates with Russia; however, there is no evidence of a formal alliance between Beijing and Moscow. Instead, they both become increasingly aggressive in their respective regions, challenge the rules-based international order, and remain opportunistic in any collaboration. They are also willing to take advantage of U.S. distraction, internal debates, or regional disputes. Growing nuclear arsenals in combination with autocratic forms of government give the adversary an advantage, as they can control defense investment without limits and are more willing to manipulate nuclear risks.

Allies are responding to the worsening security environment in diverse—and sometimes contradictory—ways, fracturing alliance cohesion and coordination and putting allies at odds with each other. European allies face multiple external and internal pressures. Externally, they continue to face persistent Russian nuclear threats and are increasingly called upon to contribute to NATO’s widening mission, including countering China’s regional aggression and global ambitions. This is a source of resentment for many western and southern European allies who have other priorities. Internally, they face growing antinuclear movements and economic pressures in the aftermath of the war in Ukraine. Operationally, NATO allies have not fully synchronized their intelligence and communication efforts and are at odds about their military contributions to the alliance. In the Indo-Pacific, allies are similarly divided about how to confront an increasingly aggressive China. The Australia-United Kingdom-United States (AUKUS) agreement is fracturing, and progress has slowed because of domestic politics in Canberra. Japan and South Korea are divided internally on how to handle China’s aggression, regional ambitions, and expansion of military capabilities. Asian allies see each other (and their European counterparts) as competitors.

European allies remain concerned that the United States’ attention is focused on Asia, whereas Asian allies perceive the United States as distracted by the acute and enduring threat from Moscow. In Washington, decisionmakers are divided on the value of NATO and alliances and are pressuring allies to contribute more to their own defense, raising questions among allies about U.S. political commitments and the capabilities underpinning extended deterrence guarantees. Adversaries take advantage of these divisions to manipulate nuclear risks, particularly during crises.

## IMPLICATIONS

A future defined by opportunistic competition will ask more of the U.S. nuclear arsenal than any other point in its history. The scenario has the highest risk of escalation, as adversaries leverage nuclear weapons and

dual-capable systems for opportunistic aggression and coercion to pursue regional gains, potentially resulting in simultaneous crises. The U.S. nuclear mission will likely need to expand to consider regional nuclear warfighting and to operate in “risk management mode,” unless it develops advanced conventional capabilities that can fulfill a similar strategic deterrent function, though this seems unlikely in the next decade. The United States will also need to expand investment in nonnuclear capabilities to maintain parity with Russia and China, including precision-guided conventional long-range strike capabilities, missile defense, and ISR. In short, this is a very expensive scenario. The United States will also need to do more to strengthen its credibility with allies, including modernizing the current arsenal and potentially establishing additional forward-deployed nuclear forces in allies’ territories to signal its commitment to their security. With allies at cross-purposes, they may also unintentionally entangle each other in regional crises in the absence of functioning synchronization and coordination.

Formal, treaty-based arms control with verification is highly unlikely in this scenario, but there may be an increased focus on informal risk reduction efforts in an effort to manage regional crises. Adversaries, however, will rely on the risk of escalation and manipulation to achieve their aims and will be reluctant to engage in risk reduction or arms control measures that would have a hand-tying effect in a crisis. An additional challenge for arms control will be that allies may perceive any negotiation between Washington and Moscow or Beijing as a sign of abandonment or appeasement. In the absence of strong U.S. assurances, allies may reconsider their nonproliferation commitments and explore developing independent nuclear capabilities. One workshop participant referred to this scenario as the “danger zone” of proliferation threats, whereby even if allies do not pursue independent capabilities, they may instead rely on nuclear hedging or latency. Should allies seriously consider pursuing independent nuclear capabilities, this would have significant and disastrous consequences for the NPT and global nuclear order more broadly, particularly if a U.S. ally withdraws from the NPT or the alliance system collapses.

## **SIGNPOSTS**

The following indicators signify the strategic environment is on a pathway to opportunistic competition:

1. Continued expansion of adversary nuclear and nonnuclear arsenals despite economic and domestic pressures in the aftermath of the pandemic and the war in Ukraine
2. Increased requests for nuclear sharing and forward-deployed nuclear and conventional forces by allies
3. Breakdown in existing agreements, such as NATO nuclear sharing or AUKUS
4. Increased requests for joint planning and exercises or force posture changes
5. Expressed allied interest in expanding strategic forces, potentially to include nuclear hedging or independent nuclear forces, along with precision-guided conventional long-range strike capabilities, missile defense systems, and additional U.S. foreign military sales
6. Disputes among allies and a general lack of coordination on strategic priorities
7. Increased requests from allies for consultations and assurances
8. U.S. domestic debates about defense spending and the value of allies

## Scenario 2: Bloc Competition

**Bloc competition is a scenario of high adversary capabilities and high alliance cohesion. In this future, China and Russia are expanding their nuclear arsenals quantitatively and qualitatively, and the United States maintains a strong and effective network of alliances.**

In this scenario, as in the previous one, China and Russia have expanded their nuclear arsenals quantitatively and qualitatively and are leveraging nuclear weapons for opportunistic aggression in their respective regions, working to drive a wedge between U.S. allies and manipulating risks to their advantage.

Unlike the previous scenario, in bloc competition, the United States and its allies unite around the significant threats posed by two peer competitors and implement practical political and technical tools to synchronize their efforts in deterring Moscow and Beijing. The United States and its allies operate as a united bloc with well-coordinated mechanisms for sharing intelligence and conducting joint operations and exercises. More broadly, there is a shared sense of purpose in both Europe and Asia concerning the importance of alliances, particularly in the face of autocratic adversaries, and the two regions are not acting at cross-purposes or competing with one another. In Europe, allies maintain unity in the aftermath of the war in Ukraine. NATO has nearly completed its transformation to a robust and operational political and military alliance, and its members have maintained their commitments to defense spending and successfully integrated forces and capabilities. The United States successfully expands U.S.-Japan-Republic of Korea cooperation and integrates its security and economic initiatives in the Indo-Pacific—including the Quad and AUKUS—and is seen as a reliable and lasting leader in the region. The United States maintains robust and active consultations with allies, along with sustained domestic investment in U.S. strategic capabilities and a proven, enduring commitment to allies. Domestically, debates linger in Washington and in foreign capitals about defense spending, but there is an overarching commitment to alliances and a shared understanding about their strategic value.

### IMPLICATIONS

A future defined by bloc competition may force the United States to consider significantly expanding the nuclear mission at the regional level as a risk management tool, which may include additional nuclear sharing arrangements or forward deploying additional nuclear capabilities. Allies will need to coordinate and contribute to a larger strategic mission. Working-level and operational coordination will be particularly important. Alliance cohesion will serve an important function in deterring adversary aggression at the regional level, though adversaries will still attempt to manipulate nuclear risk to divide allies. As China and Russia develop more advanced and sophisticated arsenals, U.S. allies will request and field more robust conventional options, including precision-guided conventional long-range strike capabilities, missile defense, and ISR.

In this scenario, the prospects for arms control are still limited. Allies may encourage the United States to pursue bilateral or trilateral arms control with Beijing and Moscow to constrain their nuclear arsenals and better manage the significant escalation risks that exist in this future. But political pressures and the overall focus on competition will likely limit what, if anything, can be negotiated.

### SIGNPOSTS

The following indicators signify the strategic environment is on a pathway to bloc competition:

1. Continued expansion of adversary nuclear arsenals despite economic and domestic pressures in the aftermath of the pandemic and the war in Ukraine
2. Increased alliance requests for conventional capabilities that fill jointly agreed roles

3. Increased allied support for collective deterrence and increased contributions toward a combined force posture
4. Shared principles and alliance coordination at the senior leadership level; at the working level, progress in intelligence sharing and operational planning contributing to a shared mission working in cooperation, rather than competition, across regions
5. Greater allied interest in Washington pursuing arms control and risk reduction measures with Moscow and Beijing, though U.S. support is uncertain because of domestic factors
6. Unified U.S. and allied domestic commitment to alliances

### Scenario 3: Shifting Competition

**Shifting competition is a scenario of low adversary (nuclear) capabilities and low alliance cohesion. It is a future in which Chinese and Russian nuclear expansion stalls, competition shifts to other domains, and the United States struggles to maintain robust alliances.**

This scenario should not be perceived as adversaries failing to compete or ceding to U.S. regional and global supremacy; rather, it is one where adversaries shift to domains where they have a perceived competitive advantage. In this future, China's nuclear arsenal stands at an estimated 450 warheads, well below previous projections. Sanctions and global exile in the aftermath of the war in Ukraine drastically weaken portions of the Russian economy, forcing Russia to divert resources to rebuild its conventional forces at the expense of its continued investment in strategic systems. Certain exotic delivery vehicles in Russia's modernization program encounter technological challenges and component shortages. This scenario might see adversaries slowing their nuclear expansion but continuing to compete at the strategic level and invest in advanced nonnuclear capabilities. China and Russia largely shift competition to the conventional domain or "gray zone," with an emphasis on disinformation campaigns to divide allies further. In this future, adversary disinformation campaigns are sowing doubt among U.S. allies about the longevity of U.S. commitments, making it difficult to coordinate effective responses and deterrence campaigns, as well as fueling disagreements over what mix of conventional, non-kinetic, and nuclear capabilities the United States and its allies need. Allies remain fearful of U.S. abandonment because of competing priorities and entrapment should the United States escalate future crises without consulting allies or building alliance cohesion.

In Europe, NATO is fractured, with some states preferring to cut their defense spending due to domestic and economic pressures in the aftermath of the war in Ukraine. Russia's slowing nuclear expansion also raises questions about the enduring value of NATO's nuclear mission, putting some allies at odds over whether the United States should withdraw nuclear weapons from Europe and make unilateral cuts to the U.S. nuclear arsenal. Overall, political disagreements and isolationist policies weaken NATO and decrease the credibility of collective action. In the Indo-Pacific region, AUKUS stalls for domestic reasons, but also because of changing attitudes throughout the region—including in Tokyo and Seoul—about the threat posed by China.

### IMPLICATIONS

A future defined by shifting competition will renew domestic debates about the size and purpose of the U.S. nuclear arsenal. Some will argue that the United States should use the stall in Russian and Chinese investment to outcompete them in nuclear capabilities, while continuing to compete in conventional and advanced technologies—though this will face significant domestic challenges. Others will argue that the United States

should focus on outcompeting in conventional and advanced technologies while pursuing nuclear arms control efforts, which may face domestic opposition but would strengthen the international nuclear regime if successful. In both cases, the United States will need to compete with Russia and China in emerging and disruptive technologies as a component of an extended deterrence strategy. In this scenario, the risk of escalation and confrontation will not disappear, but rather shift to the nonnuclear level of conflict in a new version of the stability-instability paradox.

In a scenario of shifting competition, the security landscape will look drastically different. The United States and its allies will need to develop coherent and meaningful responses to disinformation, gray zone, and cyber activities. In this future, the United States will have to rebuild alliance structures and convey the need for defense partnerships in a world where competition with adversaries is less visible and thus harder to communicate to allies and publics.

Some allies—particularly in Western Europe—may question the enduring value of the U.S. nuclear umbrella if they perceive Russian and Chinese nuclear threats as waning. Others will be reluctant to support arms control initiatives and will continue to see the U.S. nuclear umbrella as the ultimate backstop against ongoing threats from North Korea and as a means to keep China and Russia’s more aggressive gray zone tactics from escalating. Some allies may be increasingly tempted to join the Treaty on the Prohibition of Nuclear Weapons, for example, under domestic pressure to show tangible progress toward fulfilling the Article VI commitments of the NPT, especially if Russia and China are reducing their arsenals. The United States will need focus on deterring nonnuclear threats while continuing to explain to allies the importance of nuclear weapons in an overarching strategy.

## **SIGNPOSTS**

The following indicators signify the strategic environment is on a pathway to nonnuclear competition:

1. Increased Russian and Chinese disinformation campaigns and gray zone activities
2. Backpedaling by China and Russia on investments and rhetoric surrounding nuclear modernization programs
3. Increased coordination and cooperation between Moscow and Beijing
4. Gray zone conflicts at the sub-strategic level
5. Increased investment in nonnuclear strategic capabilities by adversaries
6. Allies’ wavering commitment to nuclear deterrence
7. Breakdown of alliances such as AUKUS

## **Scenario 4: Competition and Cooperation**

**Competition and cooperation is a scenario of low adversary capabilities and high alliance cohesion. In this future, Chinese and Russian nuclear expansion stalls, and the United States maintains a strong and effective network of alliances.**

As in the previous scenario, economic challenges largely stall Russian and Chinese development of nuclear and advanced capabilities. In an effort to offset their stalled modernization efforts, Moscow and Beijing form



a closer partnership with deeper economic, military, and political integration. They now conduct regular joint military exercises and disinformation campaigns in an attempt to divide U.S. allies. Both maintain nuclear forces for coercive purposes but focus investments primarily in advanced nonnuclear and non-kinetic capabilities to support increased gray zone activities, creating a more complex and integrated version of the stability-instability paradox.

In this future, European and Asian allies share a common view of the threat posed by a united China and Russia. For the United States and its allies, unity is crucial. There is a shared sense of purpose in acting as an alliance of democracies in the face of an autocratic bloc. As a result, the United States and its allies overcome information-sharing and classification challenges and develop more effective mechanisms for countering cyberattacks and disinformation campaigns.

## **IMPLICATIONS**

Across the four possible futures, this scenario is the most stable and attractive security environment for the United States and its allies. However, the growing alliance between China and Russia will complicate planning and debates over what mix of nuclear and nonnuclear capabilities are needed. The implications for the U.S. nuclear mission in this scenario will be similar to those in the shifting competition scenario, whereby the United States can choose from outcompeting Russia and China in nuclear weapons, shifting investments to advanced capabilities, or using the opportunity to pursue arms control and negotiate limits on Russian and Chinese nuclear and nonnuclear capabilities. Allies who feel more assured under the U.S. nuclear umbrella and work in coordination with each other may be more likely to support arms control negotiations. Moscow and Beijing, faced with a united alliance and significant economic challenges, may be more open to such efforts. However, formal arms control will continue to be a challenge for the United States domestically and many allies could see further reductions in U.S. nuclear and nonnuclear capabilities as a sign of waning commitment.

## **SIGNPOSTS**

The following indicators signify the strategic environment is on a pathway to competition and cooperation:

1. Backpedaling by Russia on rhetoric surrounding nuclear modernization programs
2. Increased coordination and cooperation between Moscow and Beijing
3. Gray zone conflicts at the sub-strategic level
4. Increased investment in nonnuclear strategic capabilities by adversaries
5. Uptick in adversary uses of disinformation
6. Improved alliance coordination—particularly at the working level—in intelligence sharing, countering cyberattacks and disinformation campaigns, nonnuclear defense cooperation, and other policy areas, such as arms control
7. Unified U.S. and allied domestic commitment to alliances

## **“Wild Card” Scenarios**

The above four scenarios are informed by the two primary factors of adversary capabilities and alliance cohesion, along with the assumptions identified at the outset of this report; however, significant and unforeseen changes beyond these factors could fundamentally alter the nature of the security environment

over the next decade. The PONI workshops also identified potential “wild card” factors that would have implications for U.S. extended deterrence but did not come up explicitly in the context of the four scenarios identified above. These include the following:

- Chinese invasion of Taiwan to achieve unification by force
- Change in Iran’s nuclear status
- Russian victory in the war in Ukraine, potentially involving nuclear use
- Significant U.S. domestic political changes, such as an insurrection
- Global economic depression
- Global pandemic
- North Korean use of weapons of mass destruction

A thorough analysis of these events was outside of the scope of this study, but the majority of these events would likely increase stress on alliances and result in allies asking for greater assurances from the United States, both in terms of forward-deployed capabilities and political commitments to ensure their security. Other “wild cards,” however—such as economic collapse or U.S. domestic instability—could create untenable pressures on U.S. defense spending and nuclear modernization that would force a change in extended deterrence commitments.

## Scenario Comparisons

There are three important similarities across all scenarios. First, adversaries will continue to challenge U.S. regional and global supremacy and will attempt to drive a wedge between Washington and its allies. Adversaries will seek to advance their interests through opportunistic aggression and by manipulating risks—particularly during crises—with the belief that the United States is risk averse and will seek a negotiated peace, and that increased risks will divide U.S. allies. Second, allies will require assurance from the United States, in both word and deed, in any of these scenarios. Maintaining a credible U.S. extended deterrent will not only strengthen security for the United States and its allies, but also have important nonproliferation benefits and improve alliance cohesion. In the broader context, the United States will be leading an alliance of democracies in the face of aggressive autocracies. Finally, arms control or risk reduction measures will be of interest to allies in all the scenarios (albeit in different forms) except the first one, which might see allies withdraw from the NPT and develop their own nuclear capabilities.

Despite their similarities, the scenarios also have enough variation to point to how factors such as alliance unity will affect the U.S. nuclear mission. The means by which adversaries pursue their strategic interests will have implications for the U.S. nuclear force posture and how the United States invests in its strategic capabilities. For example, if Russia shifts investment to conventional and non-kinetic capabilities in the aftermath of the war in Ukraine, this may alleviate pressure on U.S. nuclear modernization. However, it will also increase the need for the United States to invest in offensive and defensive nonnuclear advanced capabilities while continuing to maintain a credible extended nuclear deterrent. Another point of variation is the degree to which Russia and China are acting in collusion. On the one hand, a sense of a unified adversarial challenge may galvanize alliance cohesion. On the other hand, a unified effort by Moscow and Beijing could sow seeds of distrust among U.S. allies through gray zone tactics and disinformation campaigns.

Another point of variation among the scenarios is what arms control might look like. In most of the scenarios, traditional arms control treaties will be difficult because the United States may prioritize freedom of action in how it responds to adversary buildups. In these scenarios, allies may support informal risk reduction measures, such as “Incidents at Sea”-style agreements that create political commitments and set “rules of the road” for nuclear and nonnuclear weapons.

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***In most of the scenarios, traditional arms control treaties will be difficult because the United States may prioritize freedom of action in how it responds to adversary buildups.***

# Key Findings and Recommendations

**Finding:** Competition is inevitable.

Based on the scenarios in this report, even if adversaries develop nuclear capabilities at a slower pace than expected, they will increase investment and focus on nonnuclear strategic capabilities, particularly non-kinetic capabilities that will complicate U.S. decisionmaking in regional crises and challenge alliance cohesion. In short, the United States needs to prepare for a sustained era of competition with Russia and China as well as allies that will require ever-increasing security assurances. One particularly unique trait of this era of competition is the adversaries' willingness to manipulate nuclear risk and rely on nuclear weapons because they assume the United States and its allies will be risk averse. This will increase the stability-instability paradox, complicating U.S. decisionmaking and potentially undermining the cohesion of the United States' alliances and the credibility of its assurances.

The number and type of contested domains where competition and conflict can occur have grown from the Cold War era when alliances were formed and are increasingly blurred. Gray zone tactics such as disinformation campaigns, cyberattacks, and economic coercion—that target both the United States and its allies—allow adversaries to impose costs while hoping to avoid triggering escalation to a conventional war, let alone a nuclear one. This is raising questions about what the United States and its partners and allies should aim to deter and, depending on how and when deterrence fails, what types of responses may be appropriate.

**Recommendation:** The Department of Defense (DOD) and National Nuclear Security Administration (NNSA) should prioritize efforts to develop a nuclear enterprise that is agile, flexible, and responsive to the shifting geopolitical landscape as part of an integrated deterrence strategy. This will require engaging with Congress as well as the private sector and reforming defense investment and procurement, including for the nuclear enterprise. While the 2022 U.S. Nuclear Posture Review states that “‘hedging against an uncertain future’ is no

longer a stated role for nuclear weapons,” the management of the U.S. nuclear enterprise must maintain a state of responsive readiness.<sup>4</sup> The best way to prepare for the future is to build a flexible nuclear enterprise capable of tackling new and emerging threats as they arise. Additionally, there should be a shared understanding among allies about the mix of capabilities, both nuclear and nonnuclear, that are required to effectively deter adversaries, and greater insight into how the U.S. nuclear enterprise and wider defense infrastructure is working to fill any gaps. Given that greater alliance cooperation will enhance U.S. competitiveness and potentially allow for a pooling of resources, allies can and should be part of this effort through consultations and transparency measures.

**Finding:** Alliance cohesion and synchronization is essential for effective extended nuclear deterrence.

The United States has a long history of maintaining strong defense ties across Europe and Asia; however, isolationist policies and a decline in U.S. leadership pose significant obstacles to maintaining the strong network of alliances and partners that have kept the United States safe for decades. If alliance cohesion can be maintained, allies will be a force multiplier for the United States at the strategic, operational, and tactical levels. Communicating deterrence requirements and coordinating messages will be challenging in an era of disinformation and public pressures against nuclear weapons in democratic capitals. The path that leads to high alliance cohesion will not be easy. At times, disagreements will run high; however, a lack of disagreement may be a signpost indicating insincerity in dialogue and underlying alliance cohesion challenges. Since the end of World War II, U.S. commitments to provide for the defense of allies have furthered the U.S. nonproliferation mission. The 2022 U.S. Nuclear Posture Review notes “extended nuclear deterrence contributes to U.S. nonproliferation goals by giving Allies and partners confidence that they can resist strategic threats and remain secure without acquiring nuclear weapons of their own.”<sup>5</sup> However, fundamental trust in the U.S. ability to secure collective defense is far from guaranteed.

**Recommendation:** Current and future administrations should strengthen U.S. interagency efforts to invest, commit, message, and consult with U.S. allies.

*Invest in a responsive and adaptable nuclear infrastructure:* Capability and credibility go hand in hand. One of the best ways to maintain a strong alliance and to avoid intra-alliance competition will be for the United States, and the DOD specifically, to sustain funding for defense infrastructure writ large, to include the nuclear enterprise, while also competing in advanced technologies and remaining responsive to nonnuclear threats.

*Commit to long-term alliances:* U.S. policymakers and defense leaders should signal an enduring bipartisan political commitment to alliances. While political shifts are inevitable, a robust signal from Washington about the strategic importance of alliances writ large may assuage many concerns about abandonment. In addition, the DOD can take steps now to institutionalize cooperation with allies at the working level, which can further reinforce the long-term nature of U.S. commitments.

*Manage alliance communication:* DOD officials, in particular, can signal the equal importance of alliances in both Europe and Asia through improved communication and messaging. The National Defense Strategy and the focus on integrated deterrence caused some concerns, particularly in Europe, that American attention will be region-specific and some allies might be left behind. Many allies remain confused about what “integrated deterrence” means in practice and are not satisfied with U.S. explanations that European and Asian allies are of “equal importance,” while still referring to China as the long-term “pacing challenge.” Senior DOD officials should clarify this issue to help assure allies. The United States can also ask allies to contribute more to alliance security overall, such as through defense spending and joint activities.

Policymakers will have to approach this delicately, however, or risk being perceived as “pressuring” allies to do more as indicative of waning U.S. commitments.

*Revamp and strengthen alliance consultations:* In the expert workshop, numerous allies indicated that what the United States considers “consultation” is often a one-sided conversation and allies do not always feel like their voices are being heard. A business-as-usual approach to extended deterrence consultations will prove ineffective in virtually all future scenarios. The increasingly complex threat environment will require a much higher level of integration with and among allies. This is particularly true in East Asia, but it also applies to NATO allies who will need to understand how heightened threats from China and North Korea could affect planning and operations in Europe and vice versa. This means that strengthening consultation mechanisms with allies will first and foremost require much more detailed conversations about specific threats, and what specifically alliances intend to deter. To prepare for this, the DOD should develop a long-term road map for revamping U.S. consultation mechanisms and work with the U.S. interagency to take a more holistic approach to reassuring allies, including through regular consultations before policy is set. The road map should also focus on increased cross-alliance activities, such as joint exercising and intelligence sharing.

*Engaging allies with tailored messaging:* In addition, the DOD can do more to engage with allies in joint wargaming and exercises and by directly involving allies in adaptive U.S. planning. In Europe, this might also entail allies taking on a greater role in alliance strategic planning in NATO, potentially to include more burden sharing. Joint coordination with Asian allies may be more challenging in the absence of a central alliance structure, but the United States should make every effort to take a more inclusive approach.

**Finding:** Arms control is possible. It could entail informal risk reduction measures or options focused on nonnuclear capabilities. Arms control and risk reduction efforts in the future would not necessarily be unilateral measures by the United States or any of its allies, but rather reciprocal efforts with Russia and/or China.

Arms control and nonproliferation efforts can work hand in hand with extended deterrence. If done effectively, arms control can serve to stabilize competition and assure allies that certain types of dangerous capabilities will not be fielded. The study’s scenarios and workshops indicate that progress on nuclear arms control may be more likely if the contours of geopolitical competition shift slightly away from the nuclear domain. If the United States and its adversaries rely less on nuclear weapons and more on strategic conventional capabilities, allies may support and encourage more direct nuclear arms control efforts by the United States.

**Recommendation:** While formal arms control treaties and reductions are unlikely in the near future, the DOD and the U.S. interagency should work with U.S. allies to develop new approaches to strategic risk reduction to manage competition with Russia and China. These new approaches can be more flexible than traditional treaty-based arms control, but transparency and verification will still be necessary guiding principles to ensure compliance by all parties. At the same time, the United States should remain open to arms control opportunities when they arise and consult closely with allies about potential cooperation with Moscow or Beijing. If progress is made on arms control efforts, there will inevitably be costs. The United States may need to engage in trade-offs. U.S. adversaries have consistently voiced interest in arms control negotiations on the deployment and development of missile defense and space capabilities. Trade-offs on these capabilities will likely make some allies uneasy. As the United States remains open to arms control opportunities, it is crucial to incorporate allies into discussions and ensure allied buy-in. Allies should be consulted throughout any arms control dialogues, particularly about the design of arms control agreements, to mitigate potential fears of U.S. appeasement and to take into account allies’ escalation concerns.



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# Endnotes

- 1 This report discusses U.S. extended deterrence commitments across conventional and nuclear missions. When the nuclear mission is referenced exclusively, this report specifies U.S. extended nuclear deterrence.
- 2 The Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, also known as the New START Treaty, places verifiable limits on all U.S. and Russian deployed intercontinental-range nuclear weapons.
- 3 These scenarios were drafted and presented to workshop participants in autumn 2022 before the release of the Department of Defense China military power report, which included new, higher estimates for China's strategic arsenal. U.S. Department of Defense, *Military and Security Developments Involving the People's Republic of China 2022* (Washington, DC: U.S. Department of Defense, November 2022), <https://media.defense.gov/2022/Nov/29/2003122279/-1/-1/2022-MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA.PDF>.
- 4 U.S. Department of Defense, "2022 Nuclear Posture Review," in *2022 National Defense Strategy of the United States of America* (Washington, DC: U.S. Department of Defense, October 2022), 7, <https://www.defense.gov/National-Defense-Strategy/>
- 5 Ibid., 8.

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