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Perspective
EXPERT INSIGHTS ON A TIMELY POLICY ISSUE

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The Military Case for Extending the New START Agreement

Since the 1960s, the U.S. government has pursued two broad approaches to preventing nuclear aggression against the U.S. homeland, its military forces, and its allies. The first has been to maintain nuclear deterrent forces capable of surviving a first strike and mounting a response that would impose intolerable costs on the aggressor. The second has been to negotiate arms control treaties that mutually limit the number and, in some cases, the capabilities of both U.S. and Russian nuclear forces. The fundamental U.S. objective in pursuing these agreements has been to enhance strategic stability, bolster deterrence, and avoid a costly arms race.[1]

A total of six U.S.-Russian nuclear arms control agreements have entered into force since 1972.[2] The U.S. decision in 2019 to formally withdraw from the INF Treaty in light of Russia's failure to comply with its treaty obligations means that only one bilateral nuclear arms control agreement currently addresses the nuclear arsenals of the two countries.[3] That agreement is the 2010 Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, commonly referred to as the New Strategic Arms Reduction Treaty, or New START. It places limits on the numbers of strategic nuclear delivery systems that the United States and Russia can possess and deploy, as well as the total number of warheads that they can mount on those systems. Also, it provides extensive measures to enhance

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the ability of each side to verify that the other is abiding by the terms of the treaty.[4]

New START, however, is set to expire in February 2021. Under the terms of the agreement, it can be extended for a total of up to five years. Russian President Vladimir Putin has publicly expressed Russia's interest in extending New START on several occasions. The U.S. government has not yet articulated its position on such an extension and is reportedly still examining its options. In the meantime, members of the U.S. Congress have introduced legislative proposals either in support of or opposition to U.S. President Donald Trump extending New START.

The U.S. military has important equities in the outcome of this debate. First and foremost, New START caps the number of Russian intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs), and nuclear-equipped heavy bombers at known and predictable levels. Second, through its verification provisions, New START allows the United States to gain important insights into the size, capabilities, and disposition of Russia's nuclear forces beyond those provided by more-traditional intelligence methods. Taken together, these two features of the treaty help reduce uncertainty regarding the future direction of Russian nuclear forces and thereby provide the U.S. military with greater confidence in its own plans and capabilities—including the current programs to modernize all three legs of the strategic nuclear "Triad."[5]

Since the 1960s, the fundamental U.S. objective in pursuing nuclear arms control agreements with Russia has been to enhance strategic stability, bolster deterrence, and avoid a costly arms race.

Despite these military considerations, several current Trump administration officials have expressed concerns about New START and its possible extension. According to these officials, the treaty does not address Russia's sizable arsenal of shorter-range, nonstrategic nuclear weapons and it does not limit Russia's development of "novel" long-range nuclear delivery systems. Also, because New START is a U.S.-Russian bilateral agreement, it does not address China's growing nuclear capabilities or the uncertainties surrounding China's nuclear doctrine and its long-term intentions. President Trump has reportedly "charged" his national security team to think more broadly about the countries and weapons involved in nuclear arms control. Although widening the scope of the nuclear arms control process to deal with 21st-century security concerns is a laudable objective and worthy of pursuit, a key question is whether any meaningful progress can actually be made on a broader agreement before New START expires in February 2021. Such an outcome seems very unlikely given the complexities involved and the historically ponderous nature of arms control talks.

Therefore, the most prudent course of action would be for the U.S. government to agree now to extend New

START. Doing so would ensure that the existing caps on Russian long-range nuclear forces, and the associated transparency and verification provisions, would remain in place for an additional five years. It would also provide U.S. negotiators the time they need to conclude a new set of arms control measures to address concerns with both Russia's and China's nuclear capabilities and intentions. In the process, the broad, bipartisan consensus on nuclear policy that, for the past decade, has depended on commitments to pursue both nuclear modernization and nuclear arms control is more likely to be sustained. That consensus is essential to continued support for the U.S. military's programs to modernize its aging nuclear forces and associated infrastructure.

Civilian policymakers have traditionally exercised principal responsibility for developing options for the U.S. President on nuclear arms control. Military experts have nevertheless regularly been asked to provide technical advice about the potential implications of arms control measures on the conduct of operations, maintenance, training, and exercises. Additionally, senior military leaders have, from time to time, had to answer questions on nuclear arms control during committee hearings and other interactions with members of Congress and their staffs. Therefore, it is incumbent upon U.S. military officials at all levels to be conversant on the key provisions of New START, the ways in which the treaty supports U.S. military objectives, and the broader political context in which the current debate over its extension is taking place. This Perspective addresses each of these topics in turn.

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The Essential Elements of New START

The New START agreement was signed in April 2010 by President Barack Obama and Russian President Dmitri Medvedev. It replaced the 1991 START I treaty, which had expired in December 2009, and superseded the 2002 Moscow Treaty.[6]

The ensuing debate in the U.S. Senate over ratification of New START was protracted and often rancorous. To garner sufficient votes to achieve the two-thirds majority required for approval, the Obama administration acceded to Republican members' calls to increase funding to update

the existing Triad of strategic nuclear delivery forces and the nation's nuclear weapon laboratories and production facilities. The nuclear modernization programs currently being pursued by the U.S. Air Force, the U.S. Navy, and the U.S. Department of Energy's National Nuclear Security Administration (NNSA) stem directly from that commitment.[7] At the same time, the Obama administration also pledged to pursue follow-on negotiations with Russia to address the disparity between the number of shorter-range, nonstrategic (or "tactical") nuclear weapons possessed by Russia and those forward-deployed by the United States in Europe. The Senate approved the resolution of advice and consent to ratification by a 71–26 vote on December 22, 2010.[8] With that approval and the subsequent action by Russia's two legislative bodies (the Duma and the Federation Council), New START entered into force on February 5, 2011.[9]

New START does not place any constraints on missile defenses, long-range conventional strike capabilities, nonstrategic nuclear weapons, or any other nuclear delivery systems beyond ICBMs, SLBMs, and heavy bombers.

The New START agreement is a lengthy and detailed set of documents, consisting of several hundred pages of text. In a nutshell, it places specific limits on the number of U.S. and Russian strategic offensive arms. Also, it lays out a series of measures to enhance the ability of each side to verify that the other is complying with the treaty.[10]

Central Limits

Under the terms of the treaty, each country is limited to an aggregate total of

- 700 deployed ICBMs, SLBMs, and heavy bombers equipped for nuclear armaments
- 1,550 nuclear warheads on deployed ICBMs, SLBMs, and heavy bombers equipped for nuclear armaments (each such bomber is counted as having one warhead regardless of how many it can carry)
- 800 deployed and nondeployed ICBM launchers, SLBM launchers, and heavy bombers equipped for nuclear armaments.[11]

New START does not place any constraints on missile defenses, long-range conventional strike capabilities, nonstrategic nuclear weapons, or any other nuclear delivery systems beyond ICBMs, SLBMs, and heavy bombers. The treaty also does not impose any restrictions on modernizing ICBMs, SLBMs, or heavy bombers as long as the aggregate numbers are within the limits defined by the treaty. Finally, the treaty offers both countries considerable latitude in determining the actual mix of delivery systems

in their strategic nuclear arsenals, including the manner in which each chooses to take reductions to reach and stay within the treaty's limits.[12]

Reductions

The cuts that the U.S. Air Force and U.S. Navy had to make to their respective legs of the Triad to comply with New START were decided at the Secretary of Defense level and implemented through a series of U.S. Department of Defense (DoD) directives and budget decisions. When New START entered into force, the Air Force had 150 operational Minuteman III launchers at each of its three ICBM wings. The Air Force was ultimately directed to maintain all 450 silos but reduce the total number of ICBMs deployed in those silos to 400. This meant that each of the three wings would have some silos without missiles loaded in them. Additionally, all Minuteman missiles were to be configured ("de-MIRVed") over time to carry only one reentry vehicle each. The Air Force also had to take measures to render a portion of the B-52 bomber fleet incapable of conducting nuclear operations. For its part, the Navy retained all of its 14 *Ohio*-class ballistic missile submarines (with at least two always in extended overhaul), but it reduced the total number of SLBM launchers in the fleet by rendering four of the 24 launch tubes on each boat incapable of launching an SLBM. Both the United States and Russia met the February 2018 deadline for reducing their numbers to the aggregate totals specified by the treaty (see Figures 1, 2, and 3).[13]

Verification

An important feature of the New START agreement is its comprehensive provisions for ensuring that each side can verify that the other side is complying with the treaty. As in previous U.S.-Russian nuclear arms control agreements, each side is expected to continue relying heavily on its own "national technical means (NTM)" for gathering information to ensure compliance with the provisions of the treaty. Additionally, the United States and Russia are prohibited from interfering with NTM for verification of the other side and from employing concealment measures that impede verification by NTM.[14] New START also includes provisions for exchanges of data on the numbers, types, and locations of items limited by the treaty; notifications of changes to these data, such as movement of those items between facilities; the application of "unique identifiers" on ICBMs, SLBMs, and heavy bombers; and intrusive on-site inspections to confirm the accuracy of all this information. Each side is allowed to conduct 18 short-notice inspections of the other side each year. These include ten "Type One" inspections at ICBM, SLBM, and bomber bases in which

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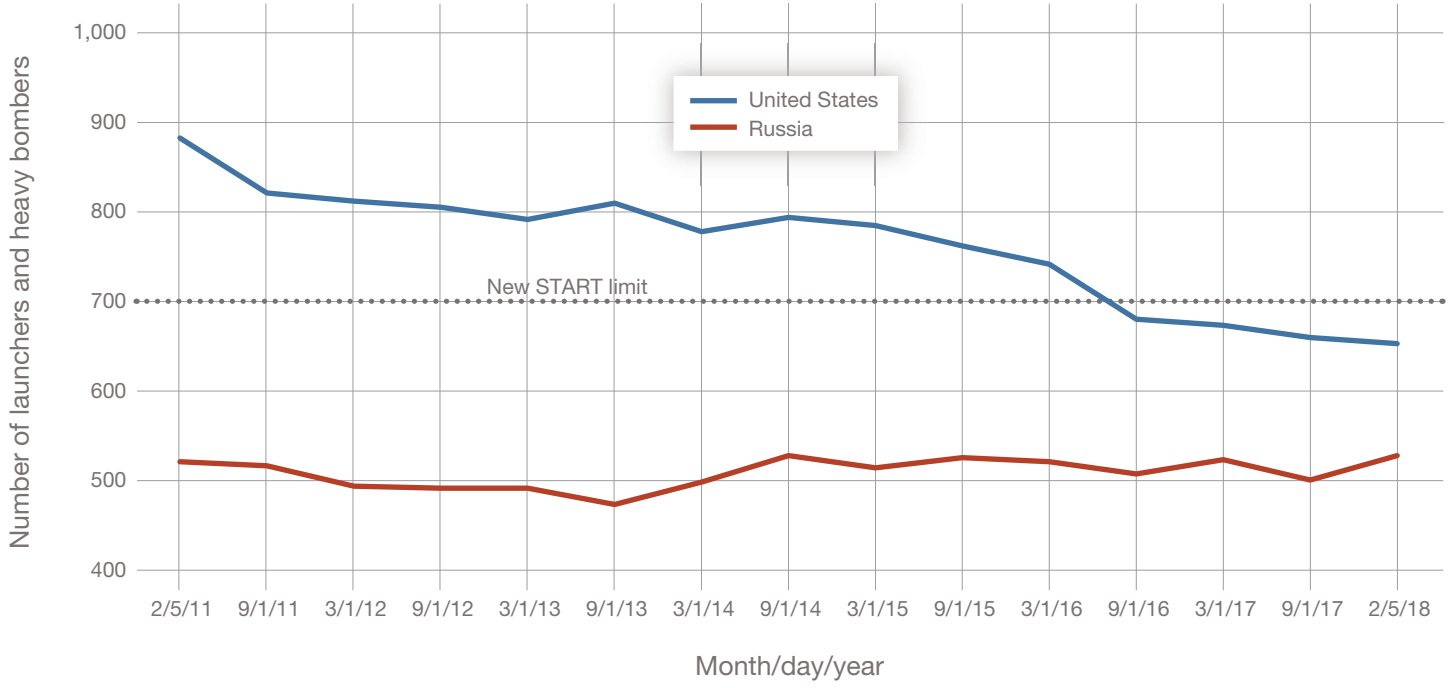
FIGURE 1

Deployed ICBMs, SLBMs, and Heavy Bombers

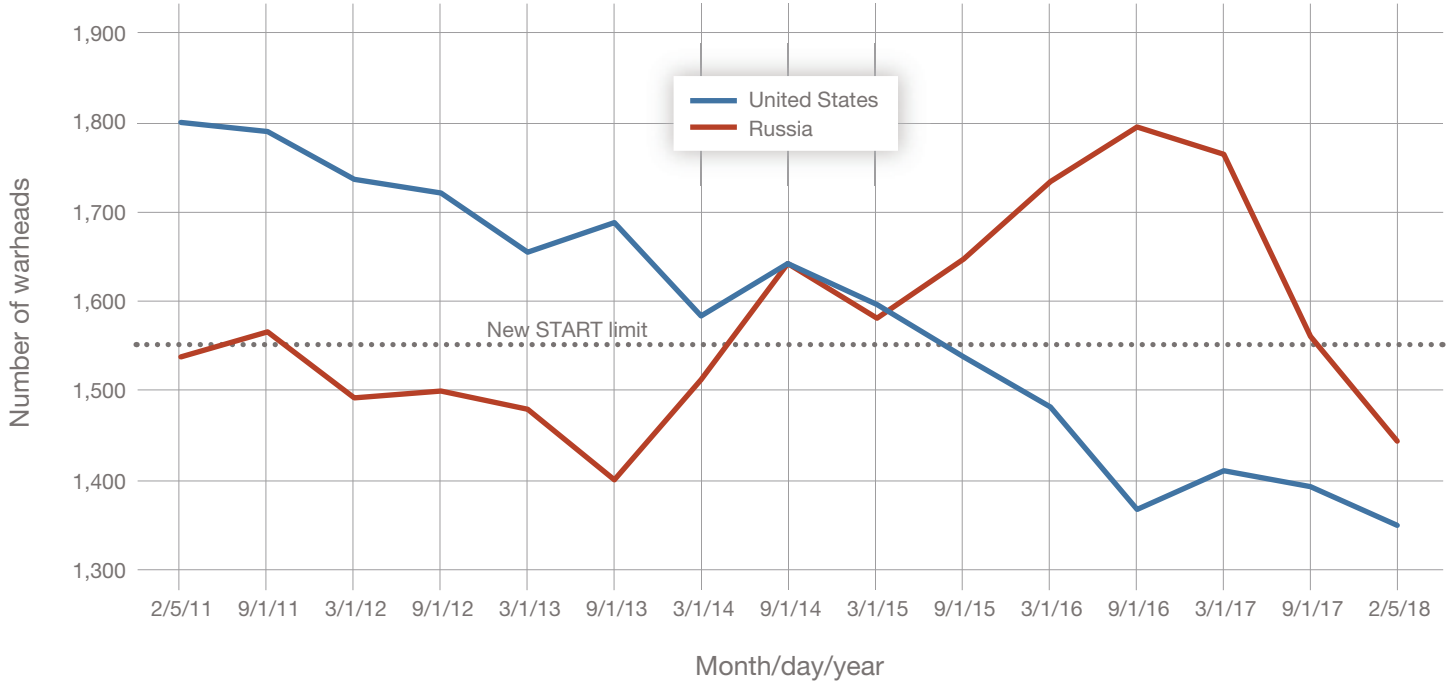


SOURCE: RAND analysis based on data from the U.S. Department of State.

inspectors are able, for example, to visually confirm the maximum number of warheads on the ICBMs and SLBMs that they have chosen to inspect. In addition, each side can also conduct eight "Type Two" inspections at facilities that house nondeployed or converted launchers and missiles. Since the treaty entered into force in 2011, both the United States and Russia have conducted the full number of on-site inspections permitted each year. As of December 2019, more than 19,000 notifications related to the location, movement, and disposition of strategic nuclear forces had been exchanged between the Nuclear Risk Reduction Centers located in Washington and in Moscow since the treaty entered into force in 2011.[15] In short, as a result of New START's verification measures, U.S. inspectors have the ability, as one former U.S. State Department official has written, to track the life of each Russian nuclear delivery system covered by the treaty "from its production to its eventual dismantlement or destruction."[16]

FIGURE 2

Warheads on Deployed ICBMs, SLBMs, and Nuclear Warheads Counted for Deployed Heavy Bombers



SOURCE: RAND analysis based on data from the U.S. Department of State.

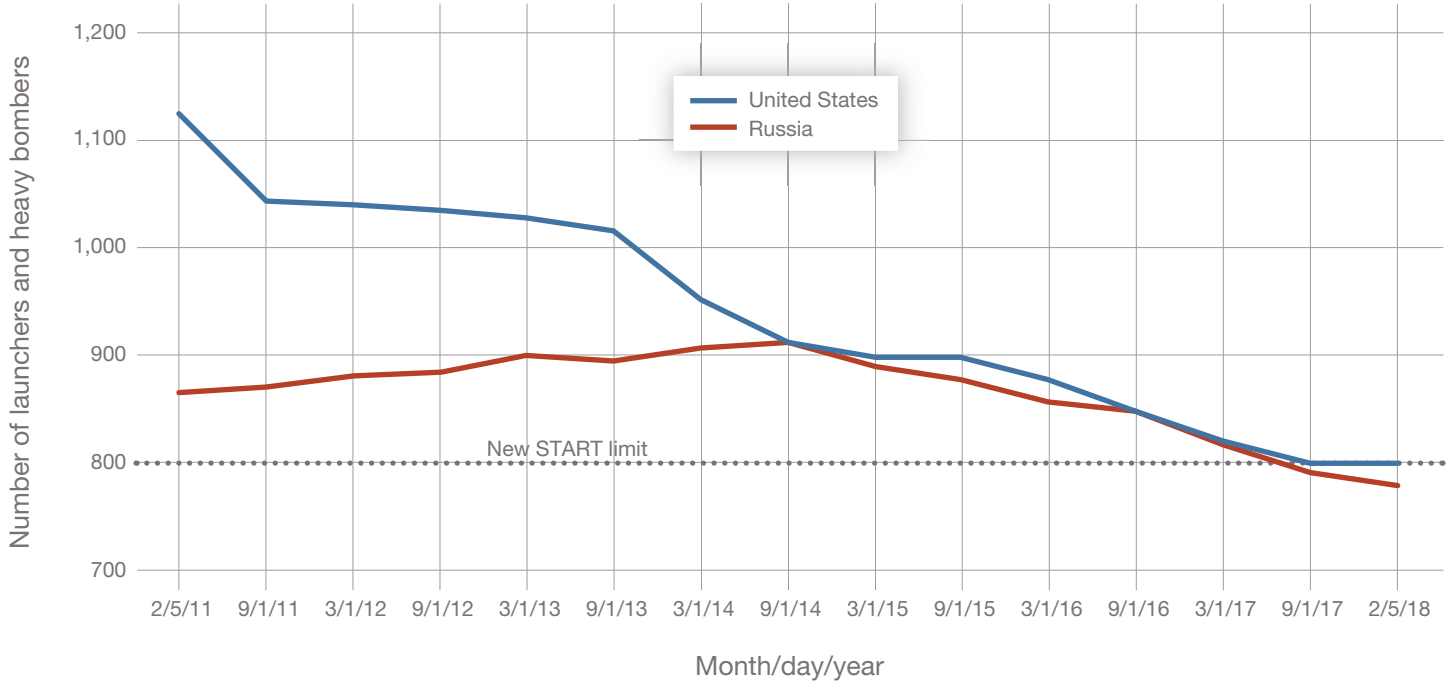
Withdrawal, Expiration, and Extension

Finally, like most treaties, the New START agreement contains language regarding withdrawal from the treaty by either side, the duration of the treaty, and the possibility of extending the treaty beyond its stipulated expiration date. In accordance with the so-called national sovereignty principle, each side has the right to withdraw from New START if it decides that "extraordinary events" related to the subject matter of the treaty "have jeopardized its supreme interests."[17] In that case, the treaty would terminate three months after either side notifies the other of its intent to withdraw and its reasons for doing so.

Under Article XIV, the treaty is to remain in force for ten years after the date it entered into force. That means that the treaty is currently set to expire on February 4, 2021, unless it is extended for a period of up to five years in total

FIGURE 3

Deployed and Nondeployed Launchers of ICBMs, SLBMs, and Deployed and Nondeployed Heavy Bombers



SOURCE: RAND analysis based on data from the U.S. Department of State.

or superseded earlier by a subsequent agreement on the reduction and limitation of strategic offensive arms.[18] Under U.S. treaty law, an extension requires only the approval of the U.S. President, not ratification by the Senate.

Should New START Be Extended?

With New START set to expire in February 2021, the desirability of extending the treaty has now become a significant policy issue, both domestically and in the context of the overall U.S.-Russia relationship.

For its part, the Russian government has, on multiple occasions, expressed a willingness to extend New START. For example, in an interview after the July 2018 summit in Helsinki, Finland, President Putin told Chris Wallace of Fox News that he had "reassured President Trump that Russia stands ready to extend the treaty," but he added that Russia had questions regarding U.S. compliance that

would first have to be decided by "experts."[19] The Russian government has publicly stated that its concerns involve the specific manner in which the United States chose to render a portion of its B-52H bombers and SLBM launch tubes incapable of performing nuclear operations.[20] In a June 2019 interview with the *Financial Times*, Putin reiterated that Russia was "ready to hold talks and to extend this treaty between the US and Russia . . . ." He also chided the U.S. government for its supposed lack of initiative on this issue: "They keep silent, while the treaty expires in 2021. If we do not begin talks now, it would be over because there would be no time even for formalities."[21] Finally, in early December 2019, Putin told a group of Russian military officials that "Russia is ready to extend the New START treaty immediately, before the year's end and without any preconditions."[22]

The U.S. government reportedly is still examining its options regarding whether to extend New START before it expires in 2021. After a meeting with his Russian counterpart in August 2018, President Trump's national security adviser at the time, John Bolton, stated that the administration was "very, very early in the process of considering" what to do about New START.[23] Subsequent congressional testimony by senior State Department and DoD officials in September 2018[24]—and again in May 2019[25]—indicated that no decision had yet been made.

In the meantime, several members of Congress have weighed in on the issue. In November 2018, bills from Democrats supporting a New START extension and bills from Republicans opposing it were introduced in both the Senate and the House of Representatives.[26] In May 2019, Representatives Eliot L. Engel (D-New York) and Michael McCaul (R-Texas)—the chair and ranking member of the House Committee on Foreign Affairs, respectively—introduced joint legislation that called for an extension of New START for five years unless Russia violates the treaty or the treaty is replaced with an agreement featuring "equal or greater constraints, transparency, and verification measures . . . ."[27] Later, Engel separately offered similar language to this joint proposal, including a restriction on the use of defense funds to withdraw from the treaty, as an amendment to the fiscal year 2020 National Defense Authorization Act (NDAA). The amendment was approved and incorporated into the version of the NDAA passed by

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the House; the version passed by the Republican-controlled Senate contained no such provision.[28] The final version of the fiscal year 2020 NDAA, ultimately passed by both chambers and signed by President Trump on December 20, 2019, states: "It is the sense of Congress that legally binding, verifiable limits on Russian strategic nuclear forces are in the national security interests of the United States." It also requires the State Department and DoD to give the Congress 120-day advance notice before notifying Russia if the United States decides to withdraw from the treaty. In addition, it calls on the State Department, DoD, the Department of Energy, and the Intelligence Community to provide a series of reports on the implications of New START expiring without replacement.[29]

In other congressional activity, Senators Chris Van Hollen (D-Maryland) and Todd Young (R-Indiana) introduced bipartisan legislation in August 2019 urging the Trump administration to extend New START until 2026.[30] Five months later, Van Hollen and Young, joined by Senator Bob Menendez (D-New Jersey), called on Acting Director of National Intelligence Joseph Maguire to conduct a National Intelligence Estimate on how Russia and China might react if New START were allowed to expire in February 2021. In their letter, the senators noted that "we believe [that] the negative consequences for the United States of abandoning New START, when Russia is in compliance with the treaty and is seeking to extend it, would be grave in the short-term and long-term."[31]

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In summary, the future of the New START agreement is clearly a matter of interest on Capitol Hill, and it will no doubt remain so until it is either extended or allowed to expire in February 2021. Therefore, it is highly likely that Pentagon officials and other national security experts will be asked during routine testimony or in other engagements with members of Congress throughout 2020 for their views on extending New START.

Military Considerations Regarding New START

In that regard, it is worth noting that senior military officials have expressed support for New START since its inception.[32] For example, in the midst of the Senate debate over the treaty's ratification in 2010, then–Secretary of Defense Robert Gates commented that the "New START

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Treaty has the unanimous support of America's military leadership—to include the chairman of the Joint Chiefs of Staff, all of the service chiefs, and the commander of the U.S. Strategic Command [USSTRATCOM], the organization responsible for our strategic nuclear deterrent."[33] Additionally, seven former four-star commanders of U.S. nuclear forces publicly endorsed early ratification and entry into force of New START. In a letter to senators, they specifically noted that "we will understand Russian strategic forces much better with this treaty than would be the case without it." They further emphasized that the treaty would contribute to a more stable relationship between the United States and Russia.[34]

More-recent statements by senior military leaders have also emphasized the value of New START. For example, in March 2017, the vice chairman of the Joint Chiefs of Staff, Gen Paul Selva, and the commander of USSTRATCOM, Gen John Hyten, each expressed strong support for New START in congressional testimony, the latter stating that "bilateral, verifiable arms control agreements are essential to our ability to provide an effective deterrent."[35] That same month, the Air Force deputy chief of operations for strategic deterrence and nuclear integration, Lt Gen Jack Weinstein, stated that the treaty was of "huge value" to the United States.[36] Two years later, in February 2019, Hyten testified: "It is still my view. I have said it multiple times. I am a big supporter of the New START agreement."[37]

Transparency and Insight

As these statements suggest, the most frequently cited benefit that New START confers on the U.S. military is the additional insight it provides into the size, capabilities, and operations of Russia's nuclear forces beyond that provided by more-traditional intelligence methods.[38] As noted earlier, New START requires each side to disclose the movement of strategic nuclear delivery systems between production and maintenance facilities and operational bases. It also permits each side to conduct 18 intrusive, on-site inspections every year to get a close-up view of the other side's strategic nuclear forces and facilities. As Hyten explained in early 2019, "we have very good intelligence capabilities, but there is really nothing that can replace the

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eyes-on/hands-on ability to look at something. And we have to do that."[39] Likewise, in written responses to questions from the Senate Armed Services Committee, Hyten's successor at USSTRATCOM, ADM Charles Richard stated, "To date, the New START Treaty has been an important transparency mechanism for maintaining U.S.-Russian stability. The verification regime allows insights into the Russian strategic TRIAD which significantly contributes to our understanding of their force posture."[40]

As a side note, the opportunity to put "boots on the ground" during New START inspections may also have wider applicability than treaty monitoring alone. U.S.-Russian military-to-military engagements have in the past helped American military officials better understand the general condition, special concerns, morale, and welfare of the Russian armed forces . . . and, presumably, the same holds true for the other side. With the downturn in bilateral relations, the opportunities for such interactions have virtually ceased. Thus, the New START inspection and consultative process is one of the few remaining venues in which face-to-face meetings between U.S. and Russian military professionals still occur on a regular basis. Therefore, it has enduring value as a means of maintaining contact between military professionals of both countries.

Stability and Predictability

Senior U.S. military leaders have likewise cited the important role that arms control agreements can and have played in constraining the numbers and, in certain instances, the capabilities of Russia's nuclear forces. The nuclear arms race between the superpowers during the Cold War was fueled in part by a concern that the other side might achieve a technological breakthrough or build up its forces in such a way as to threaten the ability to retaliate in response to nuclear aggression, thereby undermining a fundamental prerequisite of a stable, mutual deterrence. Arms control was viewed by many strategists at the time as a means to prevent either side from achieving an overwhelming first-strike advantage by capping the overall number of its deployed nuclear forces.[41]

Similarly, imposing constraints on Russia's nuclear force posture had the effect of reducing uncertainty and enhancing predictability about Russia's long-term capabilities and intentions, allowing the United States to size and shape its forces with greater confidence in the adequacy of its own investment plans and programs. During the 2010 debate over the ratification of New START, the then–commander of USSTRATCOM, General Kevin P. Chilton, warned that the less certainty the U.S. had about Russian nuclear forces,

the greater the probability that it would "either under- or overdevelop" its own capabilities: "[N]either is a good result. 'Under,' it would be a security issue; 'over' would be a cost issue. We could end up developing capabilities that we really didn't require."[42]

Nuclear Modernization

In addition to public statements on transparency, stability, and predictability, U.S. senior military leaders have also privately expressed more pragmatic considerations about the relationship between New START and the future of current U.S. nuclear modernization programs. The size and scope of these programs were conceived with New START limits very much in mind. Existing U.S. strategic nuclear delivery systems are being replaced on a roughly one-for-one basis and, thus within New START's limits on deployed ICBM, SLBMs, and heavy bombers.[43]

Even at these levels, the U.S. Congressional Budget Office estimates that the U.S. nuclear modernization program will cost a total of $494 billion over the 2019–2028 period (for an average of just under $50 billion a year), which represents roughly 6 percent of the total ten-year cost of the plans for national defense outlined in President Trump's 2019 budget.[44] As is discussed later in this Perspective, the United States and Russia would not necessarily embark on a significant buildup of their respective strategic offensive forces if New START were to expire without a replacement agreement. But if they did, the costs of maintaining and modernizing U.S. nuclear forces could certainly be far higher, which would undoubtedly intensify concerns currently being expressed by some members of Congress about the costs of the nuclear modernization program.

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Finally, as some senior defense officials have also acknowledged, the broad, bipartisan support in Congress during the past decade for maintaining and modernizing the Triad has depended in large part on a "grand bargain" that nuclear modernization and nuclear arms control would be pursued simultaneously. In April 2019, 24 Democratic senators explicitly made this point in a letter urging President Trump to extend New START: "[T]he United States has long linked bilateral arms control with its nuclear modernization efforts . . . the twin processes of arms control and modernization have moved and must continue to move in tandem."[45] As noted earlier, the United States formally withdrew from the INF Treaty in 2019. Subsequently allowing New START to expire without anything to replace it could seriously erode that consensus, potentially making it far more difficult to maintain political and public support for the current plans and corresponding budget outlays needed to update U.S. strategic nuclear forces. This is a situation senior military leaders would clearly prefer to avoid.

Objections to Extending New START

Despite the benefits of New START described by senior military leaders, Trump administration officials have publicly been noncommittal about extending the treaty past its 2021 expiration date. However, they have been more forthcoming on some of their specific concerns about the existing agreement.[46] Similar misgivings have been voiced by members of Congress and by former officials and other nongovernmental experts. These concerns can be grouped into four general categories: (1) Russia's nonstrategic nuclear weapons, (2) Russia's development of novel nuclear delivery systems, (3) China's growing nuclear capabilities and uncertainty about its long-term intentions, and (4) Russia's alleged pattern of noncompliance on major arms control agreements. An overarching question that should be answered in assessing each of these concerns is whether it is relevant to the immediate issue of extending New START for an additional five years or whether it should be more properly considered as a matter to be addressed in negotiations for a new agreement (or set of agreements) that would eventually replace New START.

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Russia's Nonstrategic Nuclear Weapons

As noted earlier, New START constrains long-range nuclear delivery systems (ICBMs, SLBMs, and nuclear-equipped heavy bombers) and the aggregate number of warheads loaded on them. It does not address shorter-range nonstrategic nuclear weapons. In 1991, President George H. W. Bush decided to unilaterally reduce and, in some cases, eliminate whole categories of U.S. nonstrategic nuclear weapons as part of the so-called Presidential Nuclear Initiatives. The Soviet government subsequently also pledged to significantly reduce its holdings, but it still retained substantially more nonstrategic nuclear weapons than the United States.[47]

Today, the United States forward-deploys to Europe a small number of just one type of nonstrategic nuclear weapon—the B61 nuclear gravity bomb—which can be delivered by certain North Atlantic Treaty Organization dual-capable fighter aircraft.[48] Given the nature of nonstrategic nuclear weapons and the manner in which they can be stored and deployed, it is technically very difficult to verify precisely how many Russia has in its possession. According to public statements by the director of the Defense Intelligence Agency (DIA), Russia possesses up to 2,000 nonstrategic nuclear weapons for delivery by a wide variety of air-, sea-, and land-based systems. Moreover, Russia is currently modernizing this diverse set of capabilities "with an eye toward greater accuracy, longer ranges, and lower yields . . . ."[49]

The fact that New START did not address the disparity in the numbers of nonstrategic nuclear weapons held by the United States and Russia became a major sticking point in the debate over New START ratification in 2010. In the end, the ratification resolution approved by the Senate called on President Obama to certify that the United States would seek to initiate negotiations with Russia that would lead to an agreement to "secure and reduce tactical nuclear weapons in a verifiable manner . . . ."[50] In his comments on signing the treaty, President Obama stated that the United States hoped "to pursue discussions with Russia on reducing both our strategic and tactical weapons, including non-deployed weapons."[51] Other senior U.S. officials subsequently stated that a major priority in any future agreement with Russia would be to address Russian nonstrategic nuclear weapons.[52]

However, negotiations over nonstrategic nuclear weapons never materialized, in large part because of Russian insistence that any such talks would also have to deal with U.S. missile defenses and long-range conventional strike systems, neither of which the U.S. government was prepared to countenance. The subsequent downturn in U.S.-Russian relations following Russia's 2014 annexation of Crimea and invasion of eastern Ukraine brought a virtual halt to all discussions between the two countries on nuclear arms control and strategic stability—a situation that continued through the end of 2019. As a result, there has really been no negotiating venue in which the topic of nonstrategic nuclear weapons has been or could be seriously addressed.

Although limiting the number and types of Russian nonstrategic nuclear weapons would be in the security interests of the United States, as well as those of its European and Asian allies, it does not logically follow that the existing limits on longer-range systems imposed by New START should be allowed to lapse because an agreement on shorter-range nuclear weapons has not yet been reached. If that were to happen, there would be more, rather than fewer, categories of Russian nuclear weapons that would be unconstrained, including systems that can directly threaten the U.S. homeland. From a military perspective, that hardly makes sense.

Russia's "Novel" Nuclear Delivery Systems

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are under development. These include a new heavy ICBM (known as Sarmat); an intercontinental-range hypersonic glide vehicle (Avangard); a maneuverable, air-launched ballistic missile (Kinzhal); a long-range, nuclear-powered cruise missile (Buresvestnik); and a nuclear-powered underwater autonomous vehicle (Poseidon).[53] Various motives have been attributed to Russia's development of these systems, including an abiding concern about the ability of Russian nuclear forces to penetrate future U.S. air and missile defenses.[54]

As noted earlier, the New START agreement limits the number of existing ICBMs, SLBMs, and long-range nuclear-equipped heavy bombers, including new types of these delivery systems.[55] The Sarmat is a new type of ICBM and, therefore, would clearly fall under the terms of the treaty. The same is also true for Avangard. In July 2019, a senior Russian military officer publicly acknowledged that the Avangard hypersonic glide vehicle would be launched aboard an ICBM and would therefore "be subject to all the procedures stipulated by [New START]."[56] And, in December 2019, the Russian news agency TASS reported that Foreign Minister Sergey Lavrov had stated, "We consider that the Avangard and Sarmat systems are covered by the [New START] treaty."[57]

However, the latter three novel systems touted by President Putin are not ICBMs, SLBMs, or nuclear-equipped heavy bombers. Consequently, they fall outside the ambit of delivery capabilities constrained by New START. The treaty does make some provision for dealing with new kinds of strategic offensive armaments. When one side believes that the other is developing such a capability, it has the right to raise the matter within the U.S.-Russian Bilateral Consultative Commission (BCC), which was established by the treaty to deal with implementation issues. The BCC, however, does not have the authority to amend the treaty or to extend its coverage to new kinds of systems.[58]

So, critics of New START are correct in asserting that the treaty does not constrain three of the novel nuclear delivery systems publicly being touted by Russian leaders. From a military perspective, the key question is whether and when the deployment of these systems would have a significant impact on the overall U.S.-Russian strategic nuclear balance or otherwise undermine strategic stability. Hyten and his successor at USSTRATCOM, Admiral Richard, have both testified that these developments require "further analysis, dialogue, and interagency review prior to making a final determination on a five-year extension."[59] That said, given repeated press reports of schedule delays associated with Russia's nuclear modernization program, it seems unlikely that the three novel systems not covered by New START could be deployed in numbers that would undermine mutual deterrence and

strategic stability before an extended agreement would expire in 2026.[60] Thus, rather than being relevant to the immediate debate on extension, the issue of Russia's novel nuclear delivery systems is more a matter of which Russian capabilities might need to be addressed in any follow-on nuclear arms control arrangements.

China's Growing Nuclear Capabilities

Because New START is a U.S.-Russian bilateral treaty, it does not address or constrain any other nuclear-weapon states, including China. Following the signature of the New START agreement in 2010, Obama administration officials remarked that the United States had encouraged Chinese counterparts to begin a dialogue on the nuclear strategies, policies, and programs of both sides and would continue to do so.[61] Much like the proposed negotiations with Russia on nonstrategic weapons, formal bilateral talks with China on nuclear weapons never happened.

In the meantime, China has continued to expand and diversify its nuclear forces. A 2019 DoD report notes that Chinese official statements still emphasize Beijing's long-standing policy of no first use of nuclear weapons and the need to maintain a limited but survivable nuclear force. However, at the same time, China continues to improve its ground- and submarine-based nuclear capabilities and is pursuing a "viable nuclear triad," including the development of a nuclear-capable air-launched ballistic missile. Additionally, the report states that China's "lack of transparency regarding the scope and scale of its nuclear modernization program raises questions regarding its future intent."[62] To deal with China's growing nuclear capabilities and the uncertainties surrounding them, senior U.S. administration officials reported in May 2019 that President Trump had "charged his national security team to think more broadly about arms control," which includes "encouraging China to join in efforts to increase transparency and limit its nuclear weapons ambitions."[63]

However, getting China to the table will be a tough sell. China has historically rejected the notion of entering into nuclear arms control discussions or agreements with the United States and Russia. Although past Chinese official statements have envisioned future multilateral negotiations on arms reductions, they also attach certain preconditions. For example, China has argued that the countries possessing the largest arsenals (i.e., the United States and Russia) should first drastically reduce their respective nuclear forces to create the necessary conditions for the complete elimination of nuclear weapons. Likewise, China has also been reluctant to discuss the size, characteristics, and location of its nuclear

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forces, claiming that secrecy is essential to ensuring the survivability of its smaller retaliatory force.[64]

Given this mindset, the kind of data exchanges, movement notifications, and on-site inspections that are essential features of New START would be an anathema to Chinese officials. Moreover, there is no indication—in public, at least—that the long-held Chinese views on this matter have changed or are likely to do so in the near future. In early May 2019, then–White House Press Secretary Sarah Huckabee Sanders confirmed that President Trump had discussed with Putin the possibility of "extending the current [New START] nuclear agreement—as well as discussions about potentially starting a new one that could include China."[65] Two days later, a Chinese foreign ministry spokesperson flatly stated that China would not take part in any trilateral negotiations on a nuclear disarmament agreement.[66] Nevertheless, in late December 2019, the State Department announced via Twitter that Assistant Secretary Chris Ford had "formally invited China to begin a strategic security dialogue on nuclear risk reduction and arms control and their future."[67]

Although eventually drawing China into official talks on nuclear arms control and strategic stability is certainly an objective worth pursuing, it is highly unlikely to yield results before New START is set to expire in February 2021. As with the other objections lodged against the treaty in the current debate on extension, the central question remains: Should the current caps on Russian strategic nuclear systems, and the associated verification measures, be allowed to prematurely expire because the treaty does not and is not likely to address China in the near term?

Russia's History of Noncompliance with Treaties

A final objection raised by those who are skeptical about extending New START is the troubling pattern of Russian noncompliance with other arms control agreements. As noted earlier, the United States decided to withdraw from the INF Treaty because Russia was violating its terms. In addition, the United States has also raised concerns about Russia's failure to meet its obligations under other treaties, including the Chemical Weapons Convention, the Open Skies Treaty, the Vienna Document, and the Treaty on Conventional Armed Forces in Europe.[68] Thus, some members of Congress have openly questioned the wisdom of extending New START given Russia's track record with respect to treaty compliance. In November 2018, 25 Republican senators signed a letter to President Trump urging him to consider "Russia's systemic abuse of arms control and international norms" in deciding whether to extend New START.[69]

On this point, it is worth noting that no one has so far seriously questioned whether Russia is, in fact, abiding by the terms of New START. The State Department is obliged to make an annual determination as to whether Russia

is in compliance with its New START obligations. Every year since the treaty entered into force, the department has certified to Congress that Russia is in compliance. This no doubt has much to do with the comprehensive verification and consultative measures that are a unique and integral part of the New START agreement.[70] Moreover, the Russian government may well calculate that the benefits of complying with the treaty outweigh the potential political or strategic risks of skirting its provisions at the moment. In that regard, tightly crafted arms control agreements like New START might be the best way to deter Russian "cheating." In that sense, it would be somewhat ironic to throw overboard the one U.S.-Russian bilateral arms control agreement that seems to work well in terms of verification and compliance.

What Happens If New START Expires Without Replacement?

As noted earlier, the Trump administration is reportedly still developing its position on extending the New START agreement. The ultimate outcome is not at all clear. Given President Trump's "charge" to think more broadly about the countries and weapons involved in nuclear arms control, much thought is being devoted within the executive branch as to how that could be accomplished, especially given Russia's demands regarding missile defense and China's reluctance to engage in any kind of nuclear arms control. A key and critical question is whether any meaningful progress can be made on a broader agreement (or set of agreements) before New START expires in 2021.

It would not be easy. The historical record clearly shows that arms control negotiations generally take a long time to produce agreement.[71] There is absolutely no empirical basis to assume or to assert that any future set of negotiations, especially one involving new parties or a broader variety of nuclear weapon systems under consideration, would be any different. The United States will come to the table with its list of desired outcomes. So, too, will Russia; and China may not come to the table at all. Working through the full range of substantive and procedural issues will take time, both to develop U.S. positions within the domestic interagency process and at the negotiating table itself. Because it is highly unlikely that a new, more expansive treaty could be wrapped up within a year's time, it is virtually certain that, if New START is not extended, it would expire before a new agreement could be completed.

The historical record clearly shows that arms control negotiations generally take a long time to produce agreement.

The expiration of New START without replacement would have serious implications for the U.S. military. First, the verification and transparency measures would cease immediately. Some observers have suggested that the two sides could mutually agree to continue data exchanges, notifications, and on-site inspections even without New START in force.[72] This idea, however, is fraught with

complicated technical considerations—in both the United States and Russia—such as allowing access to classified sites or providing legal protection to inspectors without the cover provided by a legally binding treaty.[73] It could take as much time to resolve these kinds of issues as it would to negotiate a replacement to New START.

In the meantime, the United States would lose the transparency and insight into Russian strategic nuclear forces beyond that provided by NTM. As Vincent Manzo and others have written, U.S. analysts who have come to value this information would have to adjust to living without it. That could mean redirecting a portion of the intelligence resources that are currently focused on other areas of concern to provide more coverage of Russian nuclear forces. Alternatively, additional intelligence capabilities or personnel might have to be acquired, which could entail significant costs.[74]

A second result would be an end to the constraints on the number of Russian delivery systems and the warheads loaded on them. If the treaty lapses, it is by no means a foregone conclusion that either side would embark on a significant buildup of its nuclear deterrence forces. Rather, each might calculate that currently existing and programmed forces are sufficient to provide deterrence and stability. Likewise, they might prefer to allocate resources that would be used for a nuclear buildup to improve conventional military capabilities.

However, there are two big risks associated with Russian nuclear forces no longer being constrained by a treaty. First, if Russia did decide to expand its strategic nuclear force levels, it might have the capacity to do so at a faster rate than the United States, at least initially. Much of the Russian current modernization program is either complete or already well underway; the U.S. nuclear modernization program, on the other hand, is still in its very early stages. Additionally, Russia has historically developed and deployed ballistic missiles with the capacity to carry a larger number of warheads than analogous U.S. systems can.[75] Moreover, according to a recent public statement by the director of the DIA, many of Russia's new systems "have a greater warhead delivery capacity than the systems they are replacing." Additionally, Russia's improved and expanded nuclear weapon production complex is generally assumed to be capable of processing warheads at a higher rate than that of the United States.[76] Thus, if there were to be a race to expand nuclear forces, Russia could conceivably get out of the starting blocks faster than the United States could in terms of uploading weapons onto existing

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and newly fielded systems. Whether that would constitute a fundamental shift in the strategic balance is certainly debatable. However, maintaining parity in numbers of U.S. and Russian nuclear forces has long been a fundamental objective in U.S. nuclear weapon and arms control policy.[77]

The other risk concerns the potential cost to military programs and budgets. As noted earlier, the current DoD and Department of Energy/NNSA nuclear modernization programs are predicated on replacing existing systems at New START levels. Even so, they are expensive, as described above. If the U.S. government decided that it was necessary to increase the size and scope of the U.S. nuclear modernization program in response to a Russian buildup, the costs could obviously increase. That would, in turn, require either upward adjustments to the DoD budget top-line or shifting funds from other accounts, including those for conventional forces and emerging technologies.

The Way Ahead

Given these risks, the most prudent course of action for the United States would be to take steps now to extend New START before it expires in February 2021. Doing so would ensure that Russia's nuclear forces covered by the treaty are constrained for another five years. Additionally, U.S. officials would continue to have better insight into the disposition of those forces beyond those gained through more-traditional intelligence collection and analysis. Extending New START would also make more time available to pursue a new set of negotiations that address current U.S. concerns with both Russia's and China's nuclear capabilities. Viewed in this light, New START extension is not just an end in itself; rather, it is a necessary step in setting the conditions necessary to begin talks on a broader agreement—an objective that unquestionably commands widespread bipartisan support.

Finally, even if New START is extended, the treaty will eventually expire by 2026 at the latest. The Air Force should be preparing now for what might come next. The service is currently engaged in several simultaneous nuclear modernization programs that will result in the deployment and operation of new systems and capabilities. It is true that many of these programs will not deliver fielded capabilities for several years to come. Nevertheless, it is not too soon to be seriously considering how future nuclear arms control agreements might affect the Air Force. Since 1969, the Air Force has been very involved in the interagency deliberations on arms control policy. The principal purpose for doing so has been to ensure that the limits imposed by an agreement and the provisions made for transparency and verification do not unduly impede the ability to effectively operate, maintain, and exercise Air Force nuclear forces. There are many potential devils in the arcane details of a negotiating proposal—offered by either side—that might be recognized only by military experts. Therefore, it has been and remains vitally important that experienced and highly capable Air Force representatives be at the interagency table and that they have regular access to senior leaders to inform them of developments and to seek guidance.

Additionally, the Air Force needs to ensure that the planning for the deployment and operations of its new and modernized nuclear-capable systems and their associated facilities take into account the kinds of substantive issues that have arisen and been included in arms control agreements in the past several decades. This matter cannot be

the purview of solely a small number of Air Force arms control specialists. Rather, it must be on the radar scope of senior leaders in the Pentagon and in the major commands, especially those who have roles and responsibilities in day-to-day nuclear deterrence operations.

Notes

[1] The latest official public statement on the nexus between U.S. policies on nuclear weapons and arms control is the 2018 *Nuclear Posture Review* (NPR). It states,

> Effective nuclear non-proliferation and arms control measures can support U.S., allied, and partner security by controlling the spread of nuclear materials and technology; placing limits on the production, stockpiling and deployment of nuclear weapons; decreasing misperception and miscalculation; and avoiding destabilizing nuclear arms competition. (U.S. Office of the Secretary of Defense, *Nuclear Posture Review*, Washington, D.C., February 2018, p. xvi)

One of the earliest and perhaps still the best exposition of the relationship between "armed readiness" and "arms control" can be found in Thomas C. Schelling and Morton H. Halperin, *Strategy and Arms Control*, New York: Twentieth Century Fund, 1961. Recent analyses and critiques of U.S. and Soviet/Russian approaches to implementing this concept include Lawrence Freedman, *The Evolution of Nuclear Strategy*, 3rd ed., London: Palgrave MacMillan, 2003; and Keith B. Payne, *The Great American Gamble: Deterrence Theory and Practice from the Cold War to the Twenty-First Century*, Fairfax, Va.: National Institute Press, 2008.

[2] The six U.S.-Russian nuclear arms control agreements are (1) the Interim Agreement on Certain Measures with Respect to the Limitation of Strategic Offensive Arms (known as the SALT I Interim Agreement) in 1972; (2) the Treaty on the Limitation of Anti-Ballistic Missile Systems (known as the ABM Treaty) in 1972; (3) the Treaty on the Elimination of Intermediate-Range and Shorter-Range Missiles (known as the INF Treaty) in 1987; (4) the Treaty on the Reduction and Limitation of Strategic Offensive Arms (known as START I) in 1991; (5) the Strategic Offensive Reductions Treaty (or the Moscow Treaty) in 2002; and (6) the Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (known as the New Strategic Arms Reduction Treaty, or New START) in 2010. Additionally, SALT II was signed by both the United States and Russia in 1979. Although the U.S. Senate never gave its consent to ratification and the treaty thus never entered into force, the U.S. government continued to abide by its terms. The START II Treaty in 1993 was likewise signed by the U.S. and Russian presidents; however, it also never entered into force because of delays in both the United States and Russia in ratifying it. See Amy F. Woolf, Paul Kerr, and Mary Beth Nikitin, *Arms Control and Nonproliferation: A Catalog of Treaties and Agreements*, Washington, D.C.: Congressional Research Service, RL33865, updated March 18, 2019.

[3] U.S. Department of State, "U.S. Withdrawal from the INF Treaty on August 2, 2019," press release, Washington, D.C., August 2, 2019b.

[4] The essential elements of New START are discussed in greater detail in the next section.

[5] *Triad* is a term commonly used to refer collectively to the three basic types of U.S. strategic nuclear weapon systems: (1) the long-range, nuclear-equipped bombers (B-52Hs and B-2As) and (2) the Minuteman III ICBMs operated by the Air Force; and (3) the *Ohio*-class ballistic missile submarines and Trident II SLBMs operated by the Navy. See U.S. Office of the Deputy Assistant Secretary of Defense for Nuclear Matters, *Nuclear Matters Handbook*, Washington, D.C., 2016, pp. 25–31.

[6] START I required the United States and Russia to reduce their deployed strategic nuclear forces to 1,600 delivery vehicles, carrying no more than 6,000 warheads. The Moscow Treaty obligated each side to reduce its strategic arsenal to 1,700–2,200 warheads. Even after the Moscow Treaty entered into force, START I remained in effect until it expired in December 2009. See Arms Control Association, "U.S.-Russian Nuclear Arms Control Agreements at a Glance," fact sheet, last updated August 2019.

[7] A comprehensive, unclassified description of the NNSA's programs to modernize its scientific and production facilities is provided in U.S. Department of Energy, "Fiscal Year 2020 Stockpile Stewardship and Management Plan, Report to Congress," Washington, D.C., July 2019.

[8] U.S. Senate, *Treaty with Russia on Measures for Further Reduction and Limitation of Strategic Offensive Arms*, Washington, D.C., 111th Congress, 2nd Session, Treaty Doc. 111-5, May 13, 2010.

[9] U.S. Department of State, "New START Treaty," webpage, undated-a.

[10] The full text of New START, including its protocol and annexes, can be found at U.S. Department of State, "New START: Treaty Text," webpage, undated-c. As part of the ratification process, the State Department prepared an article-by-article analysis of the treaty (see U.S.

Senate, 2010). The Congressional Research Service has produced and continues to keep current a comprehensive explanation of the treaty's provisions that is widely used on Capitol Hill (see Amy Woolf, *The New START Treaty: Central Limits and Key Provisions*, Washington, D.C.: Congressional Research Service, R41219, updated November 27, 2019b). Likewise, the Arms Control Association in Washington, D.C., provides easily accessible background information and regular updates on New START and other nuclear arms control issues on its website (see Arms Control Association, 2019).

[11] U.S. Department of State, undated-c, Article II.1.

[12] U.S. Department of State, undated-c, Article II.2.

[13] U.S. Office of the Deputy Assistant Secretary of Defense for Nuclear Matters, 2016, pp. 32–33; and Woolf, 2019b, pp. 18–21.

[14] U.S. Department of State, undated-c, Article X.1. The term NTM dates back to the first SALT agreements in the early 1970s. Although implicitly understood by both parties, the term has never been explicitly defined in any U.S.-Russian nuclear arms control treaties. A Congressional Research Service report describes NTM as "monitoring systems . . . that operate outside the territory of the other country . . . [including] photoreconnaissance satellites, radar installations, and electronic surveillance capabilities" (see Amy F. Woolf, *Monitoring and Verification in Arms Control*, Washington, D.C.: Congressional Research Service, R41201, December 23, 2011).

[15] U.S. Department of State, undated-a.

[16] Pranay Vaddi, "Bringing Russia's New Nuclear Weapons into New START," *Lawfare*, August 13, 2019.

[17] U.S. Department of State, undated-c, Article XIV.3.

[18] U.S. Department of State, undated-c, Article XIV.2.

[19] "Chris Wallace Interviews Russian President Putin," video, Fox News, July 16, 2018.

[20] U.S. Department of State, "Press Availability with Russian Foreign Minister Sergey Lavrov, Rus Hotel, Sochi, Russia," webpage, May 14, 2019a; and Michael Gordon, "Russia Warns U.S. Moves Threaten 2011 Nuclear Pact," *Wall Street Journal*, January 15, 2019.

[21] Lionel Barber and Henry Foy, "'Transcript: 'All This Fuss About Spies . . . It Is Not Worth Serious Interstate Relations,'" *Financial Times*, June 28, 2019.

[22] Vladimir Isachenkov, "Putin Offers US Immediate Extension to Key Nuclear Pact," Associated Press, December 5, 2019.

[23] Karen DeYoung, "Bolton and His Russian Counterpart Discuss Arms Control, Syria and Iran," *Washington Post*, August 23, 2018.

[24] U.S. Senate, Committee on Foreign Relations, "Andrea Thompson, Under Secretary of State for Arms Control and International Security, Statement for the Record," testimony before the Senate Committee on Foreign Relations, Washington, D.C., September 18, 2018a; U.S. Senate, Committee on Foreign Relations, "Statement of Honorable David J. Trachtenberg, Deputy Under Secretary of Defense for Policy, on the State of Arms Control with Russia," testimony before the Senate Committee on Foreign Relations, Washington, D.C., September 18, 2018b.

[25] U.S. Senate, Committee on Foreign Relations, "Under Secretary Thompson's (T) Statement for the Record, Testimony Before the Senate Committee on Foreign Relations: The Future of Arms Control Post-Intermediate-Range Nuclear Forces Treaty," Washington, D.C., May 15, 2019a; U.S. Senate, Committee on Foreign Relations, "Statement of Honorable David J. Trachtenberg Deputy Under Secretary of Defense for Policy on the State of Arms Control with Russia Before the Senate Foreign Relations Committee," Washington, D.C., May 15, 2019b.

[26] See, for example, Office of Congresswoman Liz Cheney, "Congresswoman Liz Cheney and Senator Cotton Introduce the Stopping Russian Nuclear Aggression Act," press release, November 28, 2018; Office of Senator Elizabeth Warren, "Warren, Merkley, Gillibrand, Markey Introduce Bill to Prevent Nuclear Arms Race," press release, Washington, D.C., November 29, 2018.

[27] U.S. House of Representatives, Committee on Foreign Affairs, "Engel, McCaul Introduce Legislation to Maintain Limits on Russian Nuclear Forces," press release, May 8, 2019.

[28] U.S. House of Representatives, Committee on Rules, "Amendment to Rule Comm. Print 116-19 Offered by Mr. Engel of New York," Washington, D.C., July 9, 2019.

[29] Public Law 116-92, National Defense Authorization Act for Fiscal Year 2020, December 20, 2019.

[30] Office of Senator Chris Van Hollen, "Van Hollen, Young Introduce Legislation to Preserve Limits on Russia's Strategic Nuclear Arsenal," press release, August 1, 2019b.

[31] U.S. Senate, Committee on Foreign Relations, "Senators Menendez, Young, Van Hollen Request Intelligence Review on Not Extending

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[33] Robert M. Gates, "The Case for the New START Treaty," *Wall Street Journal*, May 13, 2010.

[34] Larry Welch, Bennie Davis, John Chain, Lee Butler, Henry Chiles, Eugene Habiger, and James Ellis, letter to U.S. Senators Carl Levin, John McCain, John Kerry, and Richard Lugar, Washington, D.C., July 14, 2010.

[35] DoD, "Transcript of Hearing on Military Assessment of Nuclear Deterrence Requirements," Washington, D.C., March 8, 2017, p. 28.

[36] Aaron Mehta, "Air Force Nuclear Officer: New START Treaty Is 'Good for Us,'" *Defense News*, March 2, 2017.

[37] U.S. Senate, Committee on Armed Services, "Hearings to Receive Testimony on United States Strategic Command and United States Northern Command in Review of the Defense Authorization Request for Fiscal Year 2020 and the Future Years Defense Program," Washington, D.C., February 26, 2019a, p. 81.

[38] Klotz, 2019, p. 8.

[39] U.S. Senate, Committee on Armed Services, 2019a, p. 83

[40] U.S. Senate, Committee on Armed Services, "Advance Policy Questions for VADM Charles Richard, U.S. Navy Nominee for Appointment to the Position of Commander, United States Strategic Command," October 24, 2019b, p. 10.

[41] Klotz, 2019, p. 8.

[42] U.S. Senate, Committee on Foreign Relations, "The New START Treaty (Treaty Doc. 111-5)," hearings before the Senate Committee Foreign Relations, Washington, D.C., June 16, 2010, p. 295.

[43] Klotz, 2019, p. 8.

[44] U.S. Congressional Budget Office, "Projected Costs of U.S. Nuclear Forces, 2019 to 2028," Washington, D.C., January 24, 2019, p. 1.

[45] Office of Senator Chris Van Hollen, "Van Hollen Leads Letter Urging Extension of New START Treaty with Russia," press release, Washington, D.C., April 12, 2019a.

[46] For example, see U.S. Senate, Committee on Foreign Relations, 2018a; U.S. Senate, Committee on Foreign Relations, 2018b; U.S. Senate, Committee on Foreign Relations, 2019a; and U.S. Senate, Committee on Foreign Relations, 2019b. Also see comments by Tim Morrison, Special Assistant to the President and Senior Director for Weapons of Mass Destruction and Biodefense, National Security Council, and prepared keynote remarks from DIA's LTG Robert P. Ashley, Jr., as quoted in Hudson Institute, "The Arms Control Landscape," May 29, 2019. See also "John Bolton Delivers Remarks at Young America's Foundation," video, C-SPAN, July 30, 2019.

[47] A history of the Presidential Nuclear Initiatives is provided in Susan J. Koch, *The Presidential Nuclear Initiatives of 1991–1992*, Washington, D.C.: Center for the Study of Weapons of Mass Destruction, National Defense University, 2012. See also Frank Klotz, Susan Koch, and Frank Miller, "Unfinished Business," *New York Times*, December 13, 2011.

[48] U.S. Senate, Committee on Foreign Relations, 2018b, p. 3.

[49] Robert P. Ashley, Jr., "Russian and Chinese Nuclear Modernization Trends: Remarks at the Hudson Institute," Washington, D.C., Defense Intelligence Agency, May 29, 2019.

[50] U.S. Senate, 2010.

[51] White House, "Remarks by President Obama and President Medvedev of Russia at New START Treaty Signing Ceremony and Press Conference," Prague Castle, Prague, April 8, 2010.

[52] See, for example, White House, "The Prague Agenda, The Road Ahead: National Security Advisor on the Future of Nuclear Policy," remarks as prepared for delivery by Tom Donilon, National Security Adviser to the President, at the Carnegie International Nuclear Policy Conference, Washington, D.C., March 29, 2012.

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[54] Austin Long, "Red Glare: The Origins and Implications of Russia's 'New' Nuclear Weapons," *War on the Rocks*, March 26, 2018b.

[55] The New START agreement makes a distinction between "new types" of ICBMs, SLBMs, and nuclear-equipped heavy bombers that are covered by the agreement and "new kinds" of delivery systems (i.e., those that are not ICBMs, SLBMs, or nuclear-equipped heavy bombers) that are not covered. For more information, see the "Protocol" section of the treaty (U.S. Department of State, undated-c).

[56] Lieutenant-General Viktor Poznikhir, first deputy head of the Russian General Staff's Main Operational Department, as quoted in "Russia Fully Discharged Its Commitments Under New START Treaty in 2018—Top Brass," TASS, July 24, 2019.

[57] "Russia Ready to Include Avangard, Sarmat Systems in New START after its Extension—Lavrov," TASS, December 22, 2019.

[58] U.S. Department of State, undated-c, Article V. For an analysis of the implications of this provision for the new Russian delivery systems (written by a former member of the U.S. BCC delegation), see Vaddi, 2019.

[59] U.S. Senate, Committee on Armed Services, 2019b, p. 10.

[60] For more details on the delays in the development of Russian nuclear systems, see Hruby, 2019.

[61] White House, 2012.

[62] U.S. Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2019*, Washington, D.C., May 2019, pp. 65–66.

[63] Remarks by Secretary of State Michael Pompeo (see U.S. Department of State, 2019b); U.S. Senate, Committee on Foreign Relations, 2018b, p. 6.

[64] Chinese views on this topic are discussed at greater length in Frank G. Klotz and Oliver Bloom, "China's Nuclear Weapons and the Prospects for Multilateral Arms Control," *Strategic Studies Quarterly*, Vol. 7, No. 4, Winter 2013, pp. 7–8. A recent edition of China's defense white paper lists all the multilateral nuclear arms control agreements that China has signed (but not necessarily ratified); however, it makes no mention of bilateral nuclear negotiations with either the United States or Russia, or trilateral negotiations with both (see State Council Informational Office of the People's Republic of China, "China's National Defense in the New Era," Xinhua, July 2019).

[65] As quoted in "Trump Talks to Putin About Nuclear Weapons and the Mueller Report," Associated Press, May 3, 2019.

[66] Chinese Foreign Ministry spokesperson Geng Shuang, as quoted in "China Won't Join Talks on Trilateral Nuclear Disarmament Deal: FM," Xinhua, May 6, 2019.

[67] Michael R. Gordon, "U.S. Invites China for Talks on Nuclear Arms," *Wall Street Journal*, December 20, 2019.

[68] Ashley, 2019. The Chemical Weapons Convention is formally known as the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction. The Open Skies Treaty and the Vienna Document are known by their formal titles.

[69] John Kyl, John Cornyn, Orrin Hatch, et al., letter from 24 senators to President Donald J. Trump, Washington, D.C., November 28, 2018.

[70] An annual certification of Russia's compliance is required by the Senate's resolution of advice and consent to ratification of New START. The latest two editions of the report are available on the State Department's website (see U.S. Department of State, Bureau of Arms Control, Verification and Compliance, *Annual Report on Implementation of the New START Treaty—2018*, Washington, D.C., January 2018). Past editions can be accessed using the search term "New START" at U.S. Department of State, "U.S. Department of State Archive Websites," webpage, undated-d.

[71] During the Cold War, U.S.-Russian nuclear arms control agreements took years to complete. For example, the talks that ultimately led to START I began in 1982 and, after several fits and starts, ended in 1991. Negotiations since the end of the Cold War have taken far less time, in part because the basic framework and provisions of such agreements have already been established. The 2002 Moscow Treaty, which is less than two pages long, took six months to negotiate. However, it explicitly relied on the existing verification provisions of START I, which remained in force. Had it been necessary to agree on a new set of verification measures, the negotiation of the Moscow Treaty would probably have taken longer. Formal negotiations for New START began in July 2009 and concluded in April 2010—a total of eight months (see Woolf, Kerr, and Nikitin, 2019).

[72] For a detailed discussion of this notion and the practical difficulties of implementing more-informal arms control approaches, see Vince Manzo, *Nuclear Arms Control Without a Treaty: Risks and Options After New START*, Alexandria, Va.: Center for Naval Analyses, March 2019,

p. 69. The idea that "arms control" can (and should) range from formal treaties to mutual understandings and self-restraint certainly has a respectable pedigree, including, for example, Schelling and Halperin in *Strategy and Arms Control*, p. 77. It is worth noting that they in no way suggested that formal treaties could be done away with altogether.

[73] Manzo, 2019, p. 69.

[74] Vincent Manzo and Madison Estes, "If New START Dies, These Questions Will Need Answers," *Defense One*, July 28, 2019.

[75] For a more detailed discussion on this point, see White House, "Report of the President's Commission on Strategic Forces," Washington, D.C., April 1983, p. 4; and Amy F. Woolf, *Russia's Nuclear Weapons: Doctrine, Forces, and Modernization*, Washington, D.C.: Congressional Research Service, August 5, 2019a, pp. 8–11.

[76] DIA's publicly released assessment of these developments is described in greater detail in Ashley, 2019.

[77] On the various ways "parity" has historically been treated in U.S. nuclear doctrine and policy, see Freedman, 2003, pp. 31–33.

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About This Perspective

Since the 1960s, U.S.-Russian nuclear arms control agreements have helped enhance strategic stability, bolster mutual deterrence, and avoid an arms race. With the U.S. decision in 2019 to withdraw from the Intermediate-Range Nuclear Force Treaty, only one bilateral nuclear arms control treaty remains in force: the 2010 Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms, commonly referred to as the New Strategic Arms Reduction Treaty, or New START. However, New START is set to expire in February 2021. The U.S. government is reportedly still considering whether to exercise the option to extend New START by up to five years. In the meantime, members of Congress have introduced proposals intended either to persuade or to discourage U.S. President Donald Trump from doing so. The U.S. military has important equities in the outcome of this debate. New START caps the number of Russian long-range ballistic missiles and nuclear-equipped heavy bombers at known and predictable levels. Additionally, through its verification provisions, New START allows the United States to gain important insights into the size, capabilities, and disposition of Russia's nuclear forces beyond the information provided by more-traditional intelligence methods. Taken together, these two features of the treaty help reduce uncertainty about the future direction of Russian nuclear forces and thereby provide the U.S. military with greater confidence in its own plans and capabilities. Therefore, U.S. national security officials at all levels need to be conversant on the key provisions of New START, the ways in which the treaty supports U.S. military objectives, and the broader political context in which the current debate over its extension is taking place. This Perspective addresses each of these topics in turn.

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