FEBRUARY 2021

On the Horizon

A Collection of Papers from the Next Generation

EDITOR
Reja Younis

AUTHORS
Alex Bednarek
Brian Benedicks
Alan Cummings
John Fernandez
B.M. Gautam
Matthew S. Golub
Eric Gomez
Garrett Hinck
Phoebe M. Kotlikoff
Amelia Morgan
Ruby Russell
Stephan Varga
Anna Wagner
Paul Warnke
Zachary Zielger

A Report of the
CSIS PROJECT ON NUCLEAR ISSUES

CSIS | CENTER FOR STRATEGIC & INTERNATIONAL STUDIES

U.S. Conventional Intermediate-Range Missiles in East Asia

Can They Deter without Being Destabilizing?

Eric Gomez[1]

INTRODUCTION

The demise of the Intermediate-Range Nuclear Forces (INF) Treaty on August 2, 2019 will have important strategic reverberations. Arms control supporters and advocates have warned of new arms races and strategic instability. Some defense analysts, meanwhile, have pointed out the potential benefits of conventional U.S. ground-launched cruise and ballistic missiles with ranges between 500 and 5,500 kilometers (hereafter referred to as "intermediate-range missiles") as the United States prepares for an extended period of great power competition.

Moscow's test of a ground-launched cruise missile with treaty-violating range was the proximate cause of Washington's decision to leave the INF Treaty, but China's growing missile arsenal also nudged the United States toward withdrawal. According to a February 2019 report by the U.S.-China Economic and Security Review Commission, "Beijing has built up the world's largest and most diverse arsenal of ground-launched missiles. China's inventory contains more than 2,000 ballistic and cruise missiles, approximately 95 percent of which . . . would violate the INF Treaty if China was a signatory."[2] China's precise, long-range missile capabilities are especially threatening to the relatively few fixed sites in the region that the United States relies on to maintain a forward-deployed military presence, such as air and naval bases.

1. Eric Gomez is director for defense policy studies at the Cato Institute.
2. Jacob Stokes and Alec C. Blivas, *China's Missile Program and U.S. Withdrawal from the Intermediate-Range Nuclear Forces (INF) Treaty* (Washington, DC: U.S.-China Economic and Security Review Commission, February 4, 2019), https://www.uscc.gov/sites/default/files/Research/China%20and%20INF_0.pdf.

Under what circumstances can intermediate-range missiles contribute positively to conventional deterrence without causing significant damage to U.S.-China strategic stability? Supporters of the U.S. decision to withdraw from the INF Treaty argue that U.S. intermediate-range missiles will be beneficial for strengthening general deterrence against China's unwanted military activities, reassuring allies, and a host of other strategic goals.[3] The operational flexibility that intermediate-range missiles create could be very beneficial to the U.S. conventional position in East Asia. However, not all intermediate-range deployment models are created equal.

Intermediate-range missiles can enhance conventional deterrence without degrading strategic stability if the United States employs them in a certain way. A narrowly-defined target set and emphasis on denying easy movement for China's power projection forces would enhance the United States' conventional position while being more palatable to allies and less risky for U.S.-China strategic stability.

Before exploring the strategic implications of U.S. intermediate-range missiles in East Asia, it is valuable to briefly explain the definitions of some key terms and set the scope of analysis.

STRATEGIC STABILITY

Analysts and policymakers frequently invoke the term "strategic stability," but there is much disagreement over what strategic stability is. States frequently label the actions of their rivals as destabilizing even if the accuser is taking similar actions that it regards as stabilizing. For example, when the United States deployed a Terminal High Altitude Area Defense system to South Korea, China was quick to denounce the move as destabilizing even though Beijing is developing similar missile defense capabilities.[4] This amounts to "strategic stability for me, but not for thee."

This cynical yet popular formulation of strategic stability obscures its value as a tool for analyzing the merits of different military postures and policies. For this paper, "strategic stability" refers to a stable form of mutual deterrence where neither the United States nor China faces incentives or pressures for using nuclear weapons first in a conflict, either intentionally or inadvertently.[5] This definition of strategic stability is sometimes referred to as "first-strike stability."[6] Policies, actions, or weapons systems that increase incentives or pressures for nuclear first use are destabilizing, while those that decrease them are stabilizing.

INTERMEDIATE-RANGE MISSILES

Although the INF Treaty has "nuclear" in its name, it banned *all* ground-launched ballistic and cruise missiles with ranges between 500 and 5,500 kilometers, not just nuclear ones. The treaty was the result of the 1979 "dual-track decision," which entailed simultaneous deployments of U.S. nuclear-armed, land-based missiles to counteract similar Soviet missiles that threatened North Atlantic Treaty

3. Scott A. Cuomo, "It's Time to Make a New Deal: Solving the INF Treaty's Strategic Liabilities to Achieve U.S. Security Goals in Asia," *Texas National Security Review* 2, no. 1 (November 2018): 110, doi:10.26153/tsw/866.
4. "THAAD Deployment Undermines China-US, China-ROK Strategic Mutual Trust: Spokesman," Xinhua, August 26, 2016, http://www.globaltimes.cn/content/1002960.shtml; and Oki Nagai, "China Claims Success in Missile Shield Test," *Nikkei Asian Review*, February 7, 2018, https://asia.nikkei.com/Politics/China-claims-success-in-missile-shield-test. In the 2018 *Nuclear Posture Review*, the United States cited Russia's large arsenal of non-strategic nuclear weapons as an indicator of a dangerous "escalate to deescalate" approach to nuclear war. The Trump administration dealt with these destabilizing weapons by adding similar capabilities to the U.S. arsenal.
5. Justin V. Anderson and Amy J. Nelson, "The INF Treaty: A Spectacular, Inflexible, Time-Bound Success," *Strategic Studies Quarterly* 13, no. 2 (Summer 2019): 99, https://www.airuniversity.af.edu/Portals/10/SSQ/documents/Volume-13_Issue-2/Anderson.pdf.
6. Austin Long, "U.S. Nuclear Strategy toward China: Damage Limitation and Extended Deterrence," in *America's Nuclear Crossroads: A Forward-Looking Anthology*, Caroline Dorminey and Eric Gomez, eds. (Washington, DC: Cato Institute, 2019), 50, https://research.cato.org/americas-nuclear-crossroads.

Organization (NATO) allies and concurrent diplomatic efforts to get Moscow to reduce its deployed missiles.[7] When the INF Treaty entered into force, the United States and Soviet Union were not the only states to possess such missiles, but they had the largest and most advanced arsenals.

The intermediate-range missile landscape has changed significantly since the late-1980s. The proliferation of missile capabilities to a growing number of states hastened the INF Treaty's demise, given the treaty's unequivocal ban on the United States and Russia possessing any equivalent systems.[8] While the U.S. and Soviet missiles that helped create the INF Treaty carried nuclear warheads, improvements in precision mean that modern, conventional missiles can threaten some of the strategic capabilities that could previously only be reliably destroyed by nuclear weapons.[9]

In this paper, "intermediate-range missiles" refers to ground-launched missiles with ranges between 500 and 5,500 kilometers. Secretary of Defense Mark Esper has stated that the United States will not deploy intermediate-range missiles armed with nuclear warheads.[10] Therefore, this analysis assumes that future U.S. intermediate-range missiles will be conventional only. In the rare instances when this paper refers to U.S. air- or sea-launched missiles with ranges between 500 and 5,500 kilometers (several of which are dual-capable), this paper will make clear that these are distinct from the "intermediate-range missiles" definition.

INADVERTENT ESCALATION

The final important term to define is "inadvertent escalation," as this is the most likely way that a U.S.-China conflict could result in nuclear use. Inadvertent escalation occurs when conventional military operations unintentionally infringe upon the ability of a targeted state to effectively use its secure second-strike nuclear forces.[11] As stated by Barry Posen, author of the seminal work on inadvertent escalation, "[d]irect conventional attacks on critical nuclear forces, attacks that degrade strategic early warning or command and control systems, or even attacks on general-purpose forces that protect strategic nuclear forces, could all produce strong reactions from the party on the receiving end."[12] Actions that blur the lines between conventional and nuclear systems—such as using a common capability for nuclear and conventional command and control, deploying dual-capable systems in close proximity to each other, or having an ambiguous nuclear-use policy—can increase the risk of inadvertent escalation.[13]

7. Anderson and Nelson, "The INF Treaty," 92–96; and Kristina Spohr Readman, "Conflict and Cooperation in Intra-Alliance Nuclear Politics: Western Europe, the United States, and the Genesis of NATO's Dual-Track Decision, 1977-1979," *Journal of Cold War Studies* 13, no. 2 (Spring 2011): 39–89, https://muse.jhu.edu/article/435666.
8. Anderson and Nelson, "The INF Treaty."
9. Terence Roehrig, *Japan, South Korea, and the United States Nuclear Umbrella: Deterrence After the Cold War* (New York: Columbia University Press, 2017), 156. South Korea, for instance, has successfully tested a conventional ballistic missile capable of destroying buried North Korean leadership bunkers used for nuclear command and control. Elizabeth Shim, "Report: South Korea Tested New Ballistic Missile with Larger Warhead," UPI, May 7, 2020, https://www.upi.com/Top_News/World-News/2020/05/07/Report-South-Korea-tested-new-ballistic-missile-with-larger-warhead/5581588857625/.
10. Thomas Gibbons-Neff, "Pentagon Chief in Favor of Deploying U.S. Missiles to Asia," *New York Times*, August 3, 2019, https://www.nytimes.com/2019/08/03/world/asia/us-missiles-asia-esper.html.
11. Caitlin Talmadge, "Would China Go Nuclear? Assessing the Risk of Chinese Nuclear Escalation in a Conventional War with the United States," *International Security* 41, no. 4 (Spring 2017): 53–54, https://cpb-us-e1.wpmucdn.com/blogs.gwu.edu/dist/b/1590/files/2018/07/Talmadge-IS-2017-y16c9h.pdf.
12. Barry R. Posen, *Inadvertent Escalation: Conventional War and Nuclear Risks* (Ithaca, NY: Cornell University Press, 1991), 3.
13. James M. Acton, "Escalation through Entanglement: How the Vulnerability of Command-and-Control Systems Raises the Risks of an Inadvertent Nuclear War," *International Security* 43, no. 1 (Summer 2018): 56–99, https://carnegieendowment.org/2018/08/08/escalation-through-entanglement-how-vulnerability-of-command-and-control-systems-raises-risks-of-inadvertent-nuclear-war-pub-77028; James M. Acton, *Is It a Nuke? Pre-Launch Ambiguity and Inadvertent Escalation* (Washington, DC: Carnegie Endowment for International Peace, 2020), https://carnegieendowment.org/files/Acton_NukeorNot_final.pdf; and ibid., 12–22.

Although the risk of intentional nuclear escalation in a U.S.-China conflict is minimal, the likelihood of inadvertent escalation is higher and growing. While China's nuclear arsenal is increasing its number of warheads and adding new capabilities—a recent Defense Intelligence Agency assessment predicts the force will double in 10 years, though past assessments have not been accurate—it will still have a much smaller force compared to the United States.[14] China has an officially-stated no first use (NFU) posture, which is reflected in Chinese government statements on nuclear policy, the People's Liberation Army Rocket Force's (PLARF) exercises, and authoritative PLARF doctrine documents.[15] America's conventional position in East Asia is challenged by China's growing military power, but it is highly unlikely that it will deteriorate to the point that intentional U.S. nuclear escalation becomes Washington's preferred strategy. However, both the United States and China are taking actions that could increase inadvertent escalation risks. China, for instance, has increased the number of dual-capable missile systems in the PLARF's arsenal, and some Chinese strategists have started questioning the value of adhering to a strictly defined NFU posture.[16] The United States has (perhaps unintentionally) entangled its nuclear and conventional command and control systems in outer space, which China already had incentives to target even in a purely conventional conflict.[17]

SCOPE OF ANALYSIS

This paper discusses how U.S. intermediate-range missile deployment options could impact U.S.-China strategic stability. Although the United States did not leave the INF Treaty solely to counter China's missile threat, and a close examination of the stabilizing or destabilizing effects of intermediate-range missiles on the U.S.-Russia and U.S.-North Korea relationships is warranted, this paper does not address them.[18]

Unfortunately, there is very little unclassified information about U.S. intermediate-range missiles, in terms of both technical characteristics and the strategic rationale of the systems. Given this lack of official information, this analysis turns to theoretical arguments, media reports, and think tank assessments for evidence about potential missile characteristics and strategic purposes.

DOES THE UNITED STATES NEED INTERMEDIATE-RANGE MISSILES IN EAST ASIA?

How will U.S. intermediate-range missiles change the strategic picture in East Asia to America's benefit? The U.S. government has not released substantial information about its deployment plans

14. W.J. Hennigan and John Walcott, "U.S. Intelligence Expects China to Quickly Double Its Nuclear Stockpile," *Time*, May 29, 2019, https://time.com/5597955/china-nuclear-weapons-intelligence/; Hans M. Kristensen and Matt Korda, "Chinese Nuclear Forces, 2019," *Bulletin of the Atomic Scientists* 75, no. 4 (2019): 171–178, doi:10.1080/00963402.2019.1628511; and Hans M. Kristensen, "DIA Estimates For Chinese Nuclear Warheads," Federation Of American Scientists, May 31, 2019, https://fas.org/blogs/security/2019/05/chinese-nuclear-stockpile/. Kristensen and Korda estimate that in 2019 China had approximately 300 warheads stockpiled. The United States has roughly 4,500 warheads stockpiled and 1,400 deployed. China keeps warheads de-mated from missiles in peacetime.
15. Fiona S. Cunningham and M. Taylor Fravel, "Assuring Assured Retaliation: China's Nuclear Posture and U.S.-China Strategic Stability," *International Security* 40, no. 2 (Fall 2015): 12–15, doi:10.1162/ISEC_a_00215; and Gregory Kulacki, "Would China Use Nuclear Weapons First in a War With the United States?," *The Diplomat*, April 27, 2020, https://thediplomat.com/2020/04/would-china-use-nuclear-weapons-first-in-a-war-with-the-united-states/.
16. Cunningham and Fravel, "Assuring Assured Retaliation," 24–26, 46–47; and Eric Gomez, "Meet the DF-31AG and the DF-26: The Big Ballistic Missiles at China's Military Anniversary Parade," *The Diplomat*, August 8, 2017, https://thediplomat.com/2017/08/meet-the-df-31ag-and-the-df-26-the-big-ballistic-missiles-at-chinas-military-anniversary-parade/.
17. Acton, "Escalation through Entanglement."
18. For an initial assessment of intermediate-range missiles and U.S.-North Korea strategic stability, see Ankit Panda, "New U.S. Missiles in Asia Could Increase the North Korean Nuclear Threat," *Foreign Policy*, November 14, 2019, https://foreignpolicy.com/2019/11/14/us-missiles-asia-inf-north-korea-nuclear-threat-grow/.

and has flight tested only two potential missile designs since withdrawing from the treaty in August 2019 and the spring of 2020.[19] Therefore, most of the existing literature on the benefits of U.S. intermediate-range missiles in East Asia comes from defense analysts in think tanks and security studies scholars in academia. These analyses frequently connect the strategic utility of intermediate-range missiles to the operational flexibility they bring to America's conventional military posture.

The United States faces a challenging conventional deterrence picture in East Asia. China's conventional missile forces are both numerous and highly accurate, making them ideal systems for holding large, fixed targets at risk. Given the region's distance from the U.S. homeland, U.S. warfighting posture and extended deterrence commitments in East Asia are heavily dependent on a handful of air bases and port facilities.[20] Regional missile defense capabilities are improving, but it is relatively easy for China to make incremental improvements to offensive systems and overwhelm missile defenses.[21] While air- and sea-launched intermediate-range missiles were not prohibited by the INF Treaty, their launch platforms (ships, submarines, and aircraft) depend on these bases for logistical support.[22]

U.S. ground-based intermediate-range missile capabilities will undoubtedly increase the operational flexibility of the U.S. military vis-à-vis China. These operational benefits are directly linked to the technical characteristics of intermediate-range missiles.

The primary U.S. operational benefit would be improved survivability for offensive systems. It is generally much easier for modern sensor capabilities to locate a moving ship or aircraft than a ground-based vehicle because land presents a much more complex background for the sensor. As stated by security scholars Stephen Biddle and Ivan Oelrich, "[l]and-based missiles deployed amid a complex background thus enjoy systematic [reconnaissance, surveillance, and target acquisition] advantages against airborne or sea-surface foes."[23] China could still find and destroy intermediate-range missiles, but the task would likely take longer and be more challenging than targeting a U.S. warship or destroying an airfield with a missile salvo.

This enhanced survivability means that intermediate-range missile forces could stay within the range of China's anti-access/area denial (A2/AD) capabilities that might effectively push out U.S. aircraft and ships or, at a minimum, degrade their combat effectiveness.[24] Deploying ground-based missiles on friendly territory within the first island chain (e.g., in Japan, Taiwan, and the Philippines) would also help the United States gain more strategic depth by requiring China to surveil a larger area to

19. The two missiles were a ground-launched version of the Tomahawk cruise missile, which has been in service since 1983, and ballistic missile that appears visually similar to targets used in U.S. missile defense testing. Aaron Mehta, "Watch the Pentagon Test a Previously Banned Ballistic Missile," Defense News, December 16, 2019, https://www.defensenews.com/space/2019/12/12/pentagon-tests-previously-banned-ballistic-missile/; and Aaron Mehta, "Watch the Pentagon Test Its First Land-Based Cruise Missile in a Post-INF Treaty World," Defense News, August 26, 2019, https://www.defensenews.com/pentagon/2019/08/19/pentagon-tests-first-land-based-cruise-missile-in-a-post-inf-treaty-world/.
20. Anderson and Nelson, "The INF Treaty," 105; Thomas G. Mahnken et al., *Tightening the Chain: Implementing a Strategy of Maritime Pressure in the Western Pacific* (Washington, DC: Center for Strategic and Budgetary Assessments, 2019), 13–14, https://csbaonline.org/research/publications/implementing-a-strategy-of-maritime-pressure-in-the-western-pacific.
21. Cuomo, "It's Time to Make a New Deal," 107; and Eric Gomez, "It Can Get You into Trouble, but It Can't Get You Out: Missile Defense and the Future of Nuclear Stability," in *America's Nuclear Crossroads*, 19–20.
22. Eric Sayers, "The Intermediate-Range Nuclear Forces Treaty and the Future of the Indo-Pacific Military Balance," War on the Rocks, February 13, 2018, https://warontherocks.com/2018/02/asia-inf/.
23. Stephen Biddle and Ivan Oelrich, "Future Warfare in the Western Pacific: Chinese Antiaccess/Area Denial, U.S. AirSea Battle, and Command of the Commons in East Asia," International Security 41, no. 1 (Summer 2016): 12, doi:10.1162/ISEC_a_00249.
24. Jacob Cohn et al., *Leveling the Playing Field: Reintroducing U.S. Theater-Range Missiles in a Post-INF World* (Washington, DC: Center for Strategic and Budgetary Assessments, 2019), 18–19, https://csbaonline.org/research/publications/leveling-the-playing-field-reintroducing-us-theater-range-missiles-in-a-post-INF-world.

detect incoming threats.[25] Moreover, intermediate-range missiles increase the target set for Chinese forces. Reducing U.S. striking power is much easier if that force depends on a handful of large air and naval bases, but if mobile missiles can distribute their logistics and support facilities, it will take more Chinese strikes to achieve a similar level of disruption to U.S. operations.[26]

Improved survivability of U.S. offensive systems could enhance strategic stability by reducing incentives for China to take preemptive action in a conflict or crisis. Under the current system, where most U.S. striking power is tied to relatively few bases, Beijing faces a strong incentive to conduct preemptive attacks so it can seize a decisive advantage.[27] Distributing U.S. striking power using intermediate-range missiles could reduce China's preemption incentive by reducing the relative benefit of early offensive action. China would still improve its chances of victory by attacking U.S. air and naval bases, but this would represent a smaller proportion of America's overall military strength in the region, so the relative benefits of attacking are lower. However, the potential stabilizing effect of U.S. intermediate-range missiles depends in large part on how many missiles the United States deploys and their envisioned target set. A smaller deployment that mostly targets Chinese enabling capabilities (e.g., sensors, command and control nodes, communications systems), for example, would likely aggravate preemption incentives for both the United States and China instead of reducing them.

U.S. intermediate-range missile units could also improve the operational flexibility of U.S. air and naval forces. First, ground-based missile units could reduce the number of ships and aircraft required for effective conventional deterrence.[28] The United States may not have to deploy a bomber squadron to Guam, for example, if a missile battery can hold the same target sets at risk.[29] Moving ships and aircraft further away from China's A2/AD systems would reduce the risk of their early destruction—although such movements could make it harder to reassure allies.[30] The second positive knock-on effect of intermediate-range missiles for U.S. air and naval forces is the ability of ground-based missiles to free up payload space. Putting an Arleigh Burke-class destroyer's land-attack cruise missiles ashore would free up magazine space for missile defense interceptors or anti-ship munitions. Finally, ground-based intermediate-range missiles could improve the operational effectiveness of air and naval forces by punching holes in China's air defense networks.[31] Strikes that degrade Chinese situational awareness of follow-on attacks will make those secondary attacks more likely to succeed. However, such operations could also carry a higher risk of inadvertent escalation.[32]

COMPLICATING FACTORS: ALLIANCE POLITICS AND THE TARGET SET DEBATE

The strategic benefits of intermediate-range systems examined in the preceding section will have to be considered alongside two other factors: allies' willingness to deploy the missiles and what

25. Cuomo, "It's Time to Make a New Deal," 114.
26. Cohn et al., *Leveling the Playing Field*, 8–9, 15.
27. Thomas Shugart and Javier Gonzalez, *First Strike: China's Missile Threat to U.S. Bases in Asia* (Washington, DC: Center for a New American Security, June 2017), 2–3, https://www.cnas.org/publications/reports/first-strike-chinas-missile-threat-to-u-s-bases-to-asia.
28. Cuomo, "It's Time to Make a New Deal," 119.
29. Michael J. Mazarr, "Toward a New Theory of Power Projection," War on the Rocks, April 15, 2020, https://warontherocks.com/2020/04/toward-a-new-theory-of-power-projection/; and Sayers, "The Intermediate-Range Nuclear Forces Treaty and the Future of the Indo-Pacific Military Balance."
30. Peter Layton, "Discontinued: America's Continuous Bomber Presence," War on the Rocks, May 8, 2020, https://warontherocks.com/2020/05/discontinued-americas-continuous-bomber-presence/.
31. Cohn et al., "Leveling the Playing Field," 12.
32. Gomez, "It Can Get You into Trouble, but It Can't Get You Out," 23–25.

the missiles will target. Early reactions from U.S. allies suggest that they are not eager to accept unconstrained deployments, while the target set debate has significant implications for inadvertent escalation and strategic stability.

ALLIANCE POLITICS: WHAT IF THE UNITED STATES BUILT MISSILES BUT HAD NOWHERE TO PUT THEM?

The enhanced survivability of intermediate-range missiles could have strategic value for the United States' relationship with its East Asian allies. China's growing military capabilities pose a relatively minor threat to the U.S. homeland, but Washington is very worried about Beijing's ability to throw its weight around East Asia. If the United States lacks a convincing conventional deterrent to Chinese aggression, then both China and U.S. allies could begin questioning the viability of Washington's commitments.[33] Politically, deploying intermediate-range missiles on allied territory might restore confidence in friendly capitals that the United States is willing to uphold its commitments by providing more "boots on the ground" that would act as a tripwire should conflict break out.[34] Militarily, more survivable U.S. conventional strike platforms ought to enhance deterrence and crisis stability, which in turn should reassure allies of America's ability to come to the rescue.

This rosy picture may come to pass, but U.S. allies may not welcome missile deployments with open arms. Shortly after the United States announced its withdrawal from the INF Treaty, the governments of both Australia and South Korea indicated that they were not considering U.S. missile deployments.[35] Japan, home to the most U.S. forward-deployed troops in the region, would face considerable domestic political hurdles to approving a U.S. missile deployment.[36]

Some of the operational benefits of ground-based intermediate-range missiles have political downsides for alliance management. The mobility of ground-based missiles improves their survivability, but maximizing this operational benefit will require moving missile batteries around allied territory. Such maneuvers could expose more civilians to danger via accidents or Chinese strikes. Deploying away from populated areas would reduce some of the political risks but increase the challenges associated with keeping the missiles supplied and maintained. The U.S. military could concentrate missile garrisons and support facilities in fewer locations to make for a more palatable deployment, but fewer facilities are easier to target. Stationing the missiles near existing U.S. military facilities is another option with lower political risk, but these sites are already high on China's target list. Concentrating U.S. missiles around existing bases would undermine the ability of ground-based intermediate-range missiles to stress China's targeting capabilities. These points should not suggest that allies will categorically reject U.S. missile deployments. However, it is important for U.S. analysts and policymakers to keep allied concerns in mind given the limitations that allies might set on deployments, which in turn will alter the operational and strategic effectiveness of missiles.

33. Andrew S. Erickson, "Good Riddance to the INF Treaty," Foreign Affairs, September 2, 2019, https://www.foreignaffairs.com/articles/china/2019-08-29/good-riddance-inf-treaty; Sayers, "The Intermediate-Range Nuclear Forces Treaty and the Future of the Indo-Pacific Military Balance"; Benjamin Schreer, "After the INF: What Will U.S. Indo-Pacific Allies Do?," *Washington Quarterly* 43, no. 1 (Spring 2020): 147, doI:10.1080/0163660X.2020.1736885.
34. Schreer, "After the INF," 147; Toshi Yoshihara and Jacob Cohn, "The Case for Deploying U.S. Land-Based Missiles in Asia," *National Interest*, May 13, 2019, https://nationalinterest.org/blog/buzz/case-deploying-us-land-based-missiles-asia-57322.
35. Australia and South Korea did not explicitly rule out a deployment, but both said that they were not yet considering deployments. Franz-Stefan Gady, "Australia, South Korea Say No to Deployment of US INF-Range Missiles on Their Soil," *The Diplomat*, August 6, 2019, https://thediplomat.com/2019/08/australia-south-korea-say-no-to-deployment-of-us-inf-range-missiles-on-their-soil/; and Chris Mills Rodrigo, "Prime Minister Says US Won't Deploy Missiles in Australia," *The Hill*, August 5, 2019, https://thehill.com/policy/defense/456150-prime-minister-says-us-wont-deploy-missiles-in-australia.
36. Benjamin Rimland, "Into the Crosshairs - INF Withdrawal and Japan's Security," Tokyo Review, January 1, 2019, https://www.tokyoreview.net/2019/01/inf-withdrawal-japan-security/.

Comparing NATO's decision to deploy nuclear-armed ballistic and cruise missiles in the late-1970s and early-1980s—part of the "dual-track decision" that led to the INF Treaty—to alliance dynamics in modern East Asia helps explain why future U.S. missile deployments in Asia could be difficult. The most important feature of the dual-track decision was the leading role that U.S. allies played in making it happen. The United States was reluctant to deploy nuclear ballistic and cruise missiles to Europe, but NATO allies insisted that the missiles were necessary as visible symbols of U.S. support for the alliance.[37] As explained by Justin Anderson and Amy Nelson of the National Defense University, "[t]he U.S. decision to develop and deploy intermediate-range platforms was a direct response to NATO European allies' requests for assurance rather than an effort to fill some type of gap within the United States' nuclear deterrence strategy, posture, or force structure."[38]

In other words, NATO allies valued the signal the missiles sent above their military utility. Henry H. Gaffney, a Department of Defense official who was directly involved in the negotiations to deploy U.S. nuclear missiles in Europe, wrote in a 2014 article: "In all the discussions with the [NATO High Level Group] and in Washington, I never heard any mention of what any of these missiles might be targeted against, other than Soviet territory. *Having* them was all that was important for deterrence."[39] U.S. allies were in the driver's seat in the dual-track decision. European NATO countries were acutely worried about Soviet intermediate-range nuclear missiles and pushed the United States to deploy similar systems despite initial U.S. ambivalence. This strong political support helped NATO governments resist domestic pressure to reverse or halt the missile deployments.

The United States faces a very different set of circumstances in modern East Asia. While Washington is eager to make progress on intermediate-range missile deployments, friendly capitals seem less enthusiastic. Allies are not clamoring to accept deployments of new U.S. intermediate-range missiles, at least not publicly.[40] This lack of enthusiasm could stem from several sources. First, unlike the Soviet Union, China poses a primarily conventional threat to its neighbors rather than a nuclear threat, which is easier for allies to counteract. Japan, South Korea, Australia, and Taiwan have all taken steps to increase defense budgets, improve indigenously-produced weapons, and place themselves in a better position to counter China's growing military power.[41] While allies will certainly welcome greater U.S. support, they can also be discerning about what form this support takes. A serious deterioration of the East Asia security environment (which could come about due to the Covid-19 pandemic) could increase support for U.S. missile deployments, but demand for these systems appears low.

Second, U.S. allies have a more economically and politically entangled relationship with China than NATO allies had with the Soviet Union. Going along with more competitive U.S. policies carries greater risks and potential costs that allies need to factor into their decisionmaking.[42] Beijing is not

37. Readman, "Conflict and Cooperation in Intra-Alliance Nuclear Politics," 42–43.
38. Anderson and Nelson, "The INF Treaty," 94.
39. Henry H. Gaffney, "Euromissiles as the Ultimate Evolution of Theater Nuclear Forces in Europe," *Journal of Cold War Studies* 16, no. 1 (Winter 2014): 196–197, doi:10.1162/JCWS_a_00435. Emphasis in original.
40. Allied governments may very well be demanding missile deployments behind closed doors in discussions that will not be available for some time due to classification. Available public statements about missile deployments, however, make allies seem ambivalent at best and uninterested at worst.
41. Michael MacArthur Bosack, "What to Make of the Record Defense Budget," *Japan Times*, February 20, 2020, https://www.japantimes.co.jp/opinion/2020/02/20/commentary/japan-commentary/make-record-defense-budget/; Adam P. Liff, "Whither the Balancers? The Case for a Methodological Reset," *Security Studies* 25, no. 3 (2016): 420–459, doi:10.1080/09636412.2016.1195624; and Jennifer Lind, "Japan's Security Evolution," Cato Institute, Policy Analysis no. 788, February 25, 2016, https://www.cato.org/sites/cato.org/files/pubs/pdf/pa-788.pdf.
42. Uri Friedman, "America Is Alone in Its Cold War with China," *The Atlantic*, February 17, 2020, https://www.theatlantic.com/politics/archive/2020/02/us-china-allies-competition/606637/.

afraid to remind allies of this fact. When South Korea agreed to let the United States field a missile defense system in 2017, China conducted a targeted economic pressure campaign in an attempt to reverse the deployment.[43] China ultimately failed to get the missile defense system removed, but Seoul did agree to some limitations on future missile defense cooperation with Washington in order to lift the pressure. Chinese government officials have already warned that Beijing would "not stand idly by" if the United States deploys intermediate-range missiles to Asia.[44] Veiled threats of punishment may misfire and increase support among U.S. allies for missile deployments, but U.S. policymakers need to take the economic and political interests of its allies into account.

The strategic impacts of U.S. intermediate-range missiles are heavily dependent on the perceptions and preferences of America's allies. The United States could deploy intermediate-range missiles only on its own territory in East Asia, but this would make for longer flight times and limited deployment areas. This would reduce missiles' operational effectiveness and make them more vulnerable to attack. Moreover, the long distances that U.S. missiles would have to cover in this scenario means that they will need to be larger, more complex, and more expensive. The United States may find it easier to deploy ground-based anti-ship missiles on allied territory given that many allies are already investing in such capabilities for their own militaries.[45] Taking the politically easier route, however, could constrain the types and numbers of missiles the United States deploys, which will have follow-on effects for operational utility and strategic impact.

THE TARGET SET DEBATE: MAXIMIZERS VS. REFORMERS

Are U.S. intermediate-range missiles the missing piece of an otherwise sound strategy? Or could they form the foundation of a new strategy with different objectives and an alternative theory of victory? This is the most contentious issue in the intermediate-range missile debate and the most consequential for U.S.-China strategic stability and inadvertent escalation.

There are two broadly defined camps among supporters of deploying intermediate-range missiles: maximizers and reformers. These two groups have distinct views on how land-based missile capabilities fit into a broader picture of U.S. conventional deterrence vis-à-vis China and target sets—the Chinese systems on the receiving end of missile strikes.

Maximizers see the missiles as an important tool for achieving military overmatch in East Asia, which they regard as essential for preventing China from achieving revisionist goals using military force.[46] In the maximizer scenario, U.S. intermediate-range missiles should have a broadly defined target set that includes enabling capabilities deep in Chinese territory and the integrated air defense networks that protect them.[47]

Maximizers argue for a wide variety and large number of U.S. strike platforms for two reasons. First, it gives the U.S. military the ability to hold high-priority targets at risk from greater distances and allows for layered strikes—using more advanced, faster missiles to get around or open up holes in

43. Kristin Huang, "Chinese Companies Join Boycott of S. Korean Retailer Lotte Over Missile Shield Plans," *South China Morning Post*, March 3, 2017, https://www.scmp.com/news/china/diplomacy-defence/article/2075574/chinese-companies-join-boycott-s-korean-retailer-lotte; and Michael D. Swaine, "Chinese Views on South Korea's Deployment of THAAD," *China Leadership Monitor*, no. 52 (Winter 2017): 2, https://carnegieendowment.org/files/CLM52MS.pdf.
44. Alan Yuhas, "China Warns U.S. Against Sending Missiles to Asia Amid Fears of an Arms Race," *New York Times*, August 6, 2019, sec. World, https://www.nytimes.com/2019/08/06/world/asia/china-us-nuclear-missiles.html.
45. Mahnken et al., *Tightening the Chain*, 4–6.
46. Cuomo, "It's Time to Make a New Deal," 107.
47. Cohn et al., "Leveling the Playing Field," 23.

air defense networks that slower, more numerous missiles can then exploit.[48] Second, being able to threaten more targets further inside Chinese territory could force the People's Liberation Army into spending more money on costly missile defense capabilities to protect these newly vulnerable targets. Resources going toward protecting against U.S. intermediate-range missiles are those that cannot be used to expand China's navy, air force, or other offensive capabilities.[49] The goal of this competitive strategy is to drive Beijing toward counter moves that are both expensive and less capable of threatening China's neighbors.

The reformer camp generally favors a narrowly defined target set for U.S. intermediate-range missiles and tends to be skeptical of the value of overmatch. Reformers argue that the primary targets of intermediate-range missiles should be China's power projection forces, especially its navy.[50] Deep strikes against enabling capabilities are still possible, but these targets are not as high of a priority.

The strategic goal of such a deployment would be to stymie a Chinese offensive, make it difficult for Beijing to accomplish fait accompli military actions against its neighbors, and increase doubt and uncertainty about the success of quick, conventional action.[51] This approach mirrors many aspects of China's A2/AD strategy by using land-based missile forces to reduce the effectiveness of an adversary's naval and air power that deters by denial of military objectives rather than threat of punishment.[52]

RIGHTSIZING U.S. MISSILE STRATEGY: THE CASE FOR THE REFORMER APPROACH

U.S. intermediate-range missile deployments in East Asia should follow the reformer approach and focus on land-based sea denial. This approach will be politically easier for the United States to implement and carry lower inadvertent escalation risks while still improving America's conventional position vis-à-vis China.

The reformer perspective is enjoying some early victories. In March 2020, the U.S. Marine Corps released their 2030 force design document, which outlines a plan to shift the service away from amphibious power projection missions and toward a land-based, sea-denial force armed with mobile anti-ship missiles.[53] There is no guarantee that the 2030 force design will be fully implemented as intended, but FY 2021 budget requests indicate that the Marine Corps wants to quickly introduce intermediate-range anti-ship missiles to its arsenal.[54]

48. Cohn et al., 12, 22–23.
49. Cohn et al., 21–22; Cuomo, "It's Time to Make a New Deal," 124; Alexander Lanoszka, "The INF Treaty: Pulling Out in Time," *Strategic Studies Quarterly* 13, no. 2 (Summer 2019): 63, https://www.airuniversity.af.edu/Portals/10/SSQ/documents/Volume-13_Issue-2/Lanoszka.pdf; Sayers, "The Intermediate-Range Nuclear Forces Treaty and the Future of the Indo-Pacific Military Balance"; and Yoshihara and Cohn, "The Case for Deploying U.S. Land-Based Missiles in Asia."
50. Thomas G. Mahnken, "Countering Missiles with Missiles: U.S. Military Posture After the INF Treaty," War on the Rocks, July 16, 2019, https://warontherocks.com/2019/07/countering-missiles-with-missiles-the-u-s-military-after-the-inf-treaty/.
51. Mahnken et al., *Tightening the Chain*, 6; and Iain Marlow, "To Deter China, Refined 'Porcupine Strategy' May Be More Crucial to Taiwan than High-Profile Arms," *Japan Times*, January 16, 2020, https://www.japantimes.co.jp/news/2020/01/16/asia-pacific/f-16s-trump-taiwan-looks-inward-deter-china-weighs-porcupine-strategy/.
52. Eric Gomez, "The Future of Extended Deterrence: Are New U.S. Nuclear Weapons Necessary?," in America's Nuclear Crossroads; and Roehrig, *Japan, South Korea, and the United States Nuclear Umbrella*, 15.
53. David H. Berger, *Force Design 2030* (Washington, DC: U.S. Marine Corps, March 2020), https://www.hqmc.marines.mil/Portals/142/Docs/CMC38%20Force%20Design%202030%20Report%20Phase%20I%20and%20II.pdf?ver=2020-03-26-121328-460.
54. Matthew Fay and Michael A. Hunzeker, "No Sure Victory: The Marines New Force Design Plan and the Politics of Implementation," War on the Rocks, May 14, 2020, https://warontherocks.com/2020/05/no-sure-victory-the-marines-new-force-design-plan-and-the-politics-of-implementation/; and David Lague, "Special Report: U.S. Rearms to Nullify China's Missile Supremacy," Reuters, May 6, 2020, https://www.reuters.com/article/us-usa-china-missiles-specialreport-us/special-report-u-s-rearms-to-nullify-chinas-missile-supremacy-idUSKBN22I1EQ.

Another advantage of U.S. intermediate-range missiles for sea denial is their appeal for allied countries. As stated earlier, many U.S. allies are already pursuing land-based, anti-ship missiles for sea denial missions. A growing number of U.S. security scholars and defense analysts are encouraging allies to embrace deterrence by denial because it is affordable and makes good use of East Asia's geography.[55] Moreover, using U.S. intermediate-range missiles to hold Chinese warships at risk while avoiding deep targets is advantageous for U.S. allies precisely because doing so does not threaten the Chinese mainland.[56] If allies face significant domestic political challenges to approving U.S. missile deployments, it might still be possible to reap some of the strategic benefits by offering to co-develop new missile capabilities.

In addition to being an easier sell to U.S. allies, the reformer approach would have less dangerous effects on strategic stability due to its limited target set. Using intermediate-range missiles to destroy targets deep in Chinese territory would be more dangerous from an inadvertent escalation perspective than targeting warships at sea or bases closer to the coasts. U.S. missile strikes against four kinds of Chinese targets—nuclear weapons, nuclear delivery systems, conventional forces that protect nuclear forces, and the sensor and communications systems used to marshal a retaliatory strike—are particularly risky.[57] While no conflict between the United States and China would be completely free of inadvertent escalation risks, U.S. intermediate-range missiles would increase the likelihood of inadvertent escalation if they went after the targets that maximizers propose. This is because more of the maximizer's envisioned targets fall under the four categories of risky targets mentioned above.

At its core, the maximizer approach is an evolution of the AirSea Battle operational concept, which places a high priority on destroying Chinese command and control networks, intelligence and surveillance assets, ballistic missile bases, and air defense systems.[58] Such attacks pose a relatively small risk to China's nuclear weapons and nuclear delivery systems. The maximizers do not advocate using intermediate-range missiles to target Chinese nuclear weapons or nuclear-armed missile units on purpose. Accidental destruction of China's nuclear forces is still possible, especially if U.S. intermediate-range missiles target Chinese missile bases or launch sites. However, China appears to keep nuclear and conventional missile launch units stationed at different bases.[59] Retaining this practice of not co-mingling missile units would help reduce the risk of inadvertent escalation, though Beijing may rethink its basing practices if the conventional threat to its nuclear arsenal increases.[60]

While the maximizer approach to intermediate-range missile deployments may not threaten China's second-strike nuclear forces directly, it could pose a serious threat to the conventional forces that

55. Eugene Gholz, Benjamin Friedman, and Enea Gjoza, "Defensive Defense: A Better Way to Protect U.S. Allies in Asia," *Washington Quarterly* 42, no. 4 (2019): 171–189, doi:10.1080/0163660X.2019.1693103; Eric Heginbotham and Richard J. Samuels, "Active Denial: Redesigning Japan's Response to China's Military Challenge," *International Security* 42, no. 4 (Spring 2018): 128–169, https://dspace.mit.edu/handle/1721.1/118651; and Michael A. Hunzeker and Alexander Lanoszka, *A Question of Time: Enhancing Taiwan's Conventional Deterrence Posture* (Fairfax, VA: Schar School of Policy and Government at George Mason University, November 2018), http://csps.gmu.edu/wp-content/uploads/2018/11/A-Question-of-Time.pdf.
56. Mahnken et al., *Tightening the Chain*, 16.
57. Talmadge, "Would China Go Nuclear?," 59–60.
58. Talmadge, 53. Also see Jan van Tol et al., *AirSea Battle: A Point-of-Departure Operational Concept* (Washington: Center for Strategic and Budgetary Assessments, May 18, 2010), https://csbaonline.org/research/publications/airsea-battle-concept.
59. Cunningham and Fravel, "Assuring Assured Retaliation," 42–44.
60. Fiona S. Cunningham and M. Taylor Fravel, "Dangerous Confidence? Chinese Views on Nuclear Escalation," *International Security* 44, no. 2 (Fall 2019): 93–94, https://www.belfercenter.org/publication/dangerous-confidence-chinese-views-nuclear-escalation; and P.W. Singer and Ma Xiu, "China's Ambiguous Missile Strategy Is Risky," *Popular Science*, May 11, 2020, https://www.popsci.com/story/blog-network/eastern-arsenal/china-nuclear-conventional-missiles/.

protect China's nuclear forces and the enabling capabilities that would marshal a retaliatory strike. Attacks against Chinese air defense networks, command and control nodes, and long-range sensor capabilities are important features of the maximizer approach because these systems enable other parts of China's military strategy. If Beijing can be deprived of these and similar capabilities, then the United States stands a better chance of achieving military overmatch in a conflict. However, the destruction of these capabilities would also make China's nuclear forces more vulnerable to attack.[61] Under such circumstances the destruction of a relatively small part of China's nuclear arsenal would be much more dangerous from Beijing's perspective because it would be harder to guarantee the survivability of the remaining nuclear weapons.

The reformer approach would not remove inadvertent escalation risks, but it could reduce their impact. China's surface warships and coastal bases do contribute somewhat to the defense of its nuclear forces, but most of China's nuclear arsenal is stationed far away from the coasts. The major exception is the Yulin naval base on Hainan Island, which hosts China's ballistic missile submarines in addition to many surface warships. Attacking that base with intermediate-range missiles could carry higher inadvertent escalation risks compared to attacks on other coastal base facilities. The overarching strategic purpose of U.S. intermediate-range missiles in the reformer model is offsetting China's ability to easily project naval power into East Asia. While intermediate-range missiles could be used to target enabling capabilities inside the Chinese mainland, disrupting naval movements would be a higher priority.

CONCLUSION

Under what circumstances can intermediate-range missiles contribute positively to conventional deterrence without straining strategic stability in the U.S.-China relationship? Moving more U.S. offensive strike options ashore could reduce incentives for both countries to conduct preemptive attacks in crises while improving U.S. operational flexibility. However, not all deployment models are created equal.

Using intermediate-range missiles to achieve U.S. overmatch—the maximizer approach—is likely to cause friction with allies and increase the risks of inadvertent escalation in conventional conflict. Conversely, deploying intermediate-range missiles to deny China's ability to establish sea control in East Asia—the reformer approach—would complement existing allied military strategies and have less dangerous, though still not risk-free, implications for inadvertent escalation.

As Washington contemplates how to incorporate intermediate-range missile capabilities into its military strategy vis-à-vis China, it ought to weigh costs and benefits. Pursuing maximum U.S. flexibility and trying to deploy a wide variety of missile systems that can hold a large target set at risk is tempting. Yet going down this path would likely cause new problems for strategic stability and face greater resistance from U.S. allies. A reformer-oriented missile strategy may not improve U.S.-China strategic stability, which is being challenged by many sources of friction in the relationship, but it would not purposely erode strategic stability as the maximizer-oriented approach would do.

A more modest operational deployment model focused on a narrow target set would improve conventional deterrence against Chinese aggression without increasing the risks of inadvertent escalation. Washington might be able to have intermediate-range missiles as well as stability, but this will require a conscious effort to avoid the temptations of overmatch.

61. Talmadge, "Would China Go Nuclear?," 77–79.